

# Perceptions on Preeclampsia and Its Management in Hargeisa, Somaliland

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## Dedication

*"Do not follow where the path may lead. Go instead where there is no path and leave a trail."*

- *Ralph Waldo Emerson*

I dedicate this creation of endless days and nights of grueling thought and ceaseless preparation first and foremost to my family; my mother and father; my brothers, Ahmed and Hamdi; my sister Zahra; my best friend Samantha and finally to all the health workers and each and every person who made this thesis possible.

## **Abstract**

Preeclampsia is multisystem hypertensive disorder of unknown aetiology affecting pregnant women across the globe. It is also a deviously silent and oftentimes discreet killer of women. In Somaliland, little is known about of how preeclampsia is managed in the hospital setting, and virtually nothing is documented about the challenges health workers face during the provision of management.

The main objective of this study is to explore the knowledge and perception of health workers on preeclampsia and the management of the patients with preeclampsia. In exploring how preeclampsia is managed at the hospital level of care and by comparing the public and private sectors. This was achieved through two study sites, the government run referral hospital, and a privately owned hospital. The data collection methods were the use of observation, the review of hospital records and the interviews of 16 health workers from the two hospitals in this study. Systematic Text Condensation was used to analyse the study findings.

Throughout this study, by means of addressing the specific objectives which were; to assess how patients with preeclampsia are managed by comparing the public and private sector; and to explore the barriers and gaps faced by each sector with regards to the management of preeclampsia and eclampsia, the differences in the management practices of patients with preeclampsia between the public and private sector.

The findings of this study revealed that a variety of factors contributed to differences in management among them was a difference in organisation between the public and private hospitals. Moreover the existence of societal and traditional medicine factors, and the differences in the structural organisation of both hospitals in each sector, challenged how the hospitals provided management care for the patients with preeclampsia.

In conclusion, it is recommended that rising the knowledge of preeclampsia among pregnant women is vital not only in aiding the management of this condition but also in improving it. Similarly rising the awareness of this condition will also help in saving their lives.

## **LIST OF ABBRIVIATIONS AND ACRONYMS**

<b>WHO</b>	World Health Organization
<b>MoH</b>	Ministry of Health
<b>HGH</b>	Hargeisa Group Hospital
<b>NGO</b>	Non-governmental organization
<b>MCH</b>	Mother and Child Health center
<b>HDPs</b>	Hypertensive disorder of pregnancy
<b>BP</b>	Blood Pressure
<b>MgSO<sub>4</sub></b>	Magnesium Sulphate
<b>IV</b>	Intravenous

## CHAPTER ONE

### 1.0. INTRODUCTION

*“Most of them have no idea what preeclampsia is...”*

When the health workers were asked about the knowledge the patients with preeclampsia had about their condition, most of them agreed with what this midwife working at the government run Hargeisa group hospital had said. That most often, the women did not know about their condition.

Health workers on the other hand, are equipped with and at the same time expected to have the knowledge of what preeclampsia as well as the know how to manage it through the course of their training. Similarly, within the boundaries of the hospital, they are the ones responsible for the day to day management of the patients with preeclampsia admitted into their wards. Yet, despite the differences in the settings between the private and public hospitals, the management that is given to these patients is at the most part, expected to be similar. Both sectors follow the World Health Organisation (WHO) guidelines despite there being a few notable differences in the administration of Magnesium Sulphate ( $MgSO_4$ ) and treatment plans, and both the health workers in both sectors face the similar challenge of catering to the needs of their patients in a demanding environment.

However, this is where their similarities end there. This study examines the perceptions of preeclampsia management in two very distinct settings by exploring it primarily through the eyes of the health workers. While also acknowledging the pivotal role the patient of preeclampsia who receives this management plays in the intricacy of this process. This process is achieved by reflecting upon the descriptive data gathered from a privately owned hospital and the government run one through a set of questions.

Namely, what are the experiences the health workers face during the management of patients with preeclampsia? What are the challenges they come across in their daily work lives? And what are the needs they feel are lacking in their respective facilities in order to improve the management and the health care they provide. In order to gain a comprehensive understanding of how the health care system caters



to the patients with preeclampsia as well as how the main actors of that system, the health workers, relate to the daily challenges of management presented to them.

## **1.1 BACKGROUND**

Preeclampsia is more than just a complication of pregnancy (Dornhöfer et al, 2008). It is deviously silent and often a hidden killer of women. Preeclampsia is multisystem hypertensive disorder of undetermined aetiology. It is also one of the more prominent hypertensive conditions which is the direct cause of the many hurdles and difficulties seen by 2-8% of all the pregnancies in the world (Steegers et al, 2010). By playing a major role on the global maternal mortality scene, it does not only account for foetal mortality but also contributes to maternal and foetal morbidity, should both mother and child survive. The burden of preeclampsia is greatly felt within low to middle income countries, with more than 90% of the most severe consequences taking place in those areas, often leading to 50,000 maternal deaths per annum (Dornhöfer et al, 2008).

On the other hand, although maternal mortality is much lower in high-income settings, 16% of maternal deaths are related to hypertensive disorders alone. While in developing countries hypertensive disorders claim the lives of 26% in Latin America and the Caribbean, and 9% in Africa and Asia (Steegers et al, 2010).

However, those figures cannot be taken fully into account due to the considerable amount of unrecorded deaths taking place within the homes, particularly in Africa where deliveries are seldom conducted at a health facility and most cases of eclampsia develop either at home or on the way during transportation to a healthcare service (Ghulmiyyah et al, 2012). Therefore, in African countries, preeclampsia is the leading cause of maternal mortality (Interventions for Impact in Essential Obstetric and Newborn care, Africa regional meeting, 2011, p. p24).

In Somaliland, – the defacto unrecognised nation to the north of Somalia also known as the north-western zone, maternal mortality ratios are the worst in the world. One out of every 15 women has the risk of dying due to maternal related reasons, and there are a little over one hundred experienced doctors and midwives in the country, both in the public and private sector (MOH, 2011). A steady rise in incidence of preeclampsia cases has been noted over the past five years in Somaliland which

poses a grievous burden on the death of mothers. Preeclampsia and related hypertensive disorders are the second leading cause of these deaths with an estimate of 17%, and accordingly, death due to these conditions has been on the rise in recent years (WHO, 2010).

A recent WHO survey on the delivery of care in over 300 health facilities in 29 countries drew attention to the fact that even if coverage of magnesium sulphate is high, mortality related to one of the consequences of preeclampsia, eclampsia, was not reduced. This brings to light that more attention needs to be placed on the other elements which encompass the overall quality of care and management (Say L, May 6, 2014).

According to information gathered from the Wales Somaliland organisation, eclampsia is presently regarded as an important cause of maternal mortality in low income families. In Somaliland, hundreds of women die each year from the many complications of pregnancy. Of these, 300 women (nearly 2% of maternal deaths) die annually following eclamptic convulsions, with 99% of these deaths occurring within the low income communities within Hargeisa (WalesSomalilandLink, 2010).

### **1.1.1. SOMALILAND**

The Republic of Somaliland, formerly known as British Somaliland, is situated in the northwestern region of the Horn of Africa. It was re-formed in May 18, 1991 after breaking away from the union with Somalia, which took place in July 1960. While southern Somalia remained under the grip of a long and devastating civil war, Somaliland had declared its independence and has ever since been functioning as an independent sovereign state albeit an internationally one. The declaration of independence was led by the Somali National Movement (SNM). The SNM dissolved the 30 year ill-fated union with Somalia and reinstated the state with the sovereignty it once held for only five days (Briggs, 2012). However, it had paid a very high cost to reclaim this independence both in the form of considerable human loss and in the form of wanton destruction in property. For example, the capital city, Hargeisa, saw 90% of its structures destroyed in the war, including most of its hospitals (Leather, A. et al 2006).

## **GEOGRAPHY OF THE COUNTRY**

In terms of its geographic location, Somaliland is bordered by the republic of Djibouti to the northwest, the Gulf of Aden to the north, the Federal Republic of Ethiopia to south and west and Federal Republic of Somalia to the east. In spite of its claim to be an independent country, it is internationally seen as an autonomous of Somalia (MNPD, 2013).

Located north of the equator, the country has a total area of 137, 600 square kilometres of land and 850 kilometres of coastline, the majority of which is predominately lying along the Gulf of Aden. It is a semi-arid country, and the inhabitants recognize all four seasons, two of which are wet and the other two are dry. Gu (spring) and Dayr (autumn) are wet while Xagaa (summer) and Jiilaal (winter) are usually dry. The average annual rainfall is 14.5 inches in most parts of country, and most of it falls in Gu (the spring season), which spans from late March to early June. The climate is usually mild and the average daily temperature ranges from 20 degrees to 30 degrees Celsius.(MNPD, 2013).

The country's topography is divided into three main zones, namely Guban, the hot coastal plains, the Oogo, the relatively verdant mountain range that runs in the middle of the country, and the Hawd, which is a plateau that appears beyond the mountain range. The Guban is a zone with high temperatures and low rainfall most of the year, with temperatures in the summer reaching well over 39 degrees Celsius. However, temperatures decrease during the winter, making a dramatic increase in both the human and livestock populations. Hawd, the plateau region, is usually mild and receives more rain during the wet seasons. This area is also important for the grazing of livestock, and since a significant portion of the population is pastoralist, that is their main habitat.

## **POPULATION AND ECONOMY**

Somaliland has an estimated population of approximately 4.4 million in 2012, with a yearly growth rate of 3.14% in 2009. The country's GDP per capita in 2012 was

estimated to be at \$347. This puts Somaliland at the fourth lowest in the world, just ahead of Malawi, Congo and Burundi. (WorldBank, 2014). The population consists of nomads, who make up 55 percent, and urban and rural dwellers that cover the other 45 percent. The largest number of urban dwellers, estimated to be around a million, live in Hargeisa, the capital city. The country's population density is assessed at 28 persons per km<sup>2</sup> in 2009, with the life expectancy of its people estimated to be between 49 to 60 years of age (MOH, 2011).

Under the constitution, Somaliland is an Islamic State. Promotion of a religion other than Islam is unlawful and the state upholds to Islamic doctrines deterring any behaviour contrary to Islamic morals and beliefs (Somaliland Constitution, 2000). The influence of Islam in the lives of people is great throughout the country, and faith plays a leading role in their everyday life. The official language of the country is Somali with Arabic and English also being widely spoken although mostly through official or commercial use.

The traditional socio-political system of the country, which is still reflected on its modern social and political structures, is based on kinship. Major clans that are founded by a common male ancestor, which are divided into sub-clans and lineages as they grow and expand, portray the primary social and political identity of the individual and give him or her sense of belonging and pride. In the context of Somaliland, the Isaaq clan is the largest clan, followed by the Gadabuursi and Issa in the west and the Harti comprising Dulbahante and Warsangeli in the east.

During the 30-year union between former British Somaliland and former UN Trusteeship of Somalia administered by Italy, which collapsed in 1991, the people of Somaliland were political and economically marginalized and suppressed. This marginalization and suppression reached its peak during the reign of the military dictatorship of Siad Barre, which led to the civil war and near total destruction of the North (i.e. Somaliland) and subsequently to the collapse of the state of Somalia. (UNHCR, 2011).

The official currency of Somaliland is the Somaliland Shilling. The country's main source of economy and the official "backbone" of its wealth is livestock. The abundant resources of livestock, which includes sheep, goats, camels, and cattle, had historically been the main reason for the British to establish a protectorate – a

protectorate that could provide a steady supply of meat to their garrisons in the Aden colony thus naming the country as Aden's "butcher shop" (Samatar, 2002).

Around 65 percent of the population depends on livestock and livestock products for food consumption and as a means of monetary income. In consequence of this, the revenues generated from livestock and livestock products account for 40 percent of gross domestic product and 60 percent of export earnings (Leather et al, 2006). However, this major source of the national income is squeezed by the recurrent droughts that frequently occur in the country and adversely affect both the vegetation and the animal stocks - causing poverty and unemployment which are evidently prevalent (MOH, 2011). For example, the estimated figures of poverty in the urban areas of Somaliland is 29%. While rural poverty is higher at 38% (WorldBank, 2014). Crop husbandry is relatively uncommon in most parts of the country and provides only 20 percent of the country's population with their livelihood. Foreign aid and remittances from the Somaliland population living overseas continue to be a major source of income and the country's main economic support.

### **1.1.2. HARGEISA CITY**

The capital of Somaliland is Hargeisa. According to Demographia in 2015, it has an estimated population of approximately over 750,000. This makes the Hargeisa the 652<sup>nd</sup> largest city in population size. The city occupies an area of 65 square kilometres with a population density of 11, 600 inhabitants per square kilometre (Demographia, 2015). The name Hargeisa when translated from Somali means "the place where hides are sold" (Briggs, 2012). Other major towns are Burao, which is the second largest city, Berbera, the main seaport, Borama, Erigavo, and Las Anod. (MNDP, 2013).

During the civil war in late 1980s, and in an effort to defeat the predominantly Isaaq resistance of the Somali National Movement (SNM), based in Hargeisa, which had been fighting the military dictatorship of Siad Barre, Hargeisa had taken the brunt of the destruction caused by regime's war machine. Tens of thousands of civilians were killed, and hundreds of thousands were displaced, leaving most of the towns of the country empties out and in ruins. (UNHCR, 2011).

### **1.1.3. HEALTH CARE IN SOMALILAND**

The health indicators for Somaliland are some of the worst in the world and are miserable when compared to other countries in sub-Saharan Africa. According to the MOH, the maternal mortality ratio is estimated to be between 1400 and 1000 per 100,000 live births. The infant mortality rate is 90/1000 whereas under-five mortality is approximately 145/1000. Fully immunised child rates are at a mean 5%. And the top ten causes of morbidity in the country include preventable infectious diseases which are caused by sanitation challenges (MOH, 2011), and non-communicable diseases such as high blood pressure and diabetes that have seen increasing rates over the past years.

Health care access in the urban areas of the country is relatively extensive when compared to the rural areas. For example in the case of maternal care, at home births are still carried out in the rural areas without the aid of a skilled birth attendant. Mothers in Somaliland are most likely to die during childbirth while children that are born may not make it to their first birthday when compared to neighbouring Ethiopia or Djibouti (WorldBank, 2014).

The leading cause of death among women of reproductive age in Somaliland are due to maternal issues such as haemorrhage, puerperal sepsis, eclampsia and obstructed labour. The risk of a woman dying from these maternal causes is 1 in every 15 women. There is also a significant shortage of health workers with only a little over 100 doctors in the country both in the public and private sectors and a similar number of qualified midwives. The public sector of Somaliland comprises 15 hospitals, 87 Maternal and Child Health centres (MCHs) and 165 health posts throughout the entire country, however most of the posts which are outside of the urban areas are manned by little to no staff (MOH, 2011).

The health care sector in the country is tremendously burdened by three major factors: an absence of funding from the government, a collapsed health care system struggling to function after the major conflicts the country has gone through, and a gigantic vacuum in the teaching and training of all units of health care workers which dates all the way back to the “united” Somalia era. These problems, coupled with the chronic shortage of qualified health professionals, poor governance, and limited resources that the health services face, hinder the progress to combat the growing

burden of high maternal mortality rates. Along with other medical challenges, such as tuberculosis, the country is in a critical situation when it comes to healthcare services. (Leather et al, 2006).

As previously mentioned, one of the key issues in the health sector, apart from the chronic shortage of qualified health professionals, is the very limited public financial resources allocated for the health services. The situation often leads to the inability of the government to promptly pay the salaries of its health workers. And therefore, over the past few years, there has been a growing trend of health workers seeking employment in the private sector, which is experiencing a high rate of growth, while the public health sector is stagnant and is in need of major investment and overall. (Leather, A. et al, 2006).

The Ministry of Health (MoH) is the institution in authority of the health care needs of the nation. It is accountable for the guarantee of good health services to citizens by means of its production, delivery, and coordination through the widespread structure and network of its health sector. During the post-conflict period, and specifically from 1999 to 2011, the MoH chartered a national health policy in which a massive decentralization process took place and that resulted in the dispersal of the management and control to the regions. (MOH, 2011)

#### **1.1.4. THE PUBLIC SECTOR**

The public sector in the health system of Somaliland is comprised of an Essential Package of Health Services (EPHS) structure which includes the Primary Health Unit (PHU), the Health Centre (HC), the Referral Health Centre (RHC), and the regional hospitals. Moreover, there are specialist hospitals, such as the Tuberculosis Hospital in Hargeisa, and two mental hospitals one in Hargeisa and the other in Berbera (WHO-AIMS, 2009).

According to the National Policy Report by the Ministry of Health (MOH, 2011), the Primary Health Unit is the core provider of health to the community. It attends to a population of over 300 households and is staffed by at least one trained community health worker. The Unit provides basic care including maternity health services. However, the community health worker that mans the post is only trained as a paramedic and yet she is expected to identify common diseases, offer antenatal

care, and assist in uncomplicated deliveries – a formidable task that can pose many challenges for a barely trained health worker.

In contrast, the Health Centre is where one can find a qualified nurse, a midwife, an auxiliary nurse and a community midwife. It serves as an outreach support system which provides service to the Primary Health Unit. It encompasses an estimated population of 5000 people and serves as a point of referral for 2 to 3 Primary Health Units. Health Centres garner assistance from international agencies for the supply of equipment and drugs as well as minor incentives for the health staff posted there.

There are six regional hospitals in Somaliland. The one in the capital, Hargeisa, which is known as Hargeisa Group Hospital is the largest and also serves as the major referral hospital in the public sector.

The public health care sector in Somaliland faces countless challenges, and there is an urgent and obvious need for strengthening the systems in all parts of the sector, starting from the district and community levels, in order to achieve a universal and efficient delivery of health.

The Health Policy from the Ministry of Health summarises, the strengths and weaknesses of the health services system as follows:

The strengths are: the availability of a basic infrastructure, basic equipment in relatively good condition, strong presence of donor support from international agencies, availability of essential drugs, and the utilisation of user fees for the enhancement of services in the hospitals.

The weaknesses are: inability of the healthcare infrastructure to cover the needs of the entire population with the current number of health posts being much less to meet the demands of a growing population, poor management of patients within hospitals and other health posts, majority of deliveries still taking at home with the assistance of traditional birth attendants, imbalances in most donor funded programs which are mostly very vertical in nature, inadequate or lack of clinical supervision, and limited consumer knowledge and awareness of the services provided (MoH,2011).



### 1.1.5. THE PRIVATE SECTOR

According to the National Health Policy of the Ministry of Health, the private sector covers over 60% of the health sector of Somaliland. The services which fall under the umbrella of the private system are those that are provided by the private not for profit organisations or non-governmental organisations (NGOs), the private health practitioners, and the traditional medicine sector.

The NGOs' presence is greatly felt in the health sector particularly in collaboration with the public hospital where they provide sophisticated equipment and medicines that would have been difficult to acquire without their assistance. Since they are better organised and financially sturdier, they have discernible capabilities and advantages over the other sub-sectors. They maintain a collaborative link with the MoH, and it is through this link that aid to the public sector is maintained.

The private sector is popularly accepted by the population who seek its services that make health workers available round the clock. Aside from the privately run clinics and health centres, private pharmacies also play a significant role in the delivery of health care. Many of them have outpatient and lab services which are provided by qualified physicians and lab technicians.

The initiation of a social franchise network intervention by PSI in 2011 called *BULSHO-KAAB* meaning “community helper” was seen as a chance to utilise the potential of the private pharmacies, helping them in enhancing the delivery of high quality services and products to the communities. The Bulsho-kaab network of pharmacies also offers a range of maternal and child health services at affordable prices to the low-income sections of the communities (PSI, 2013).

However, although the private sector provides a substantial share of the health services, there remains an absence of integration with the public sector especially at the level of privately run clinics, health centres and hospitals. And it is this deficiency of collaboration that restricts the propagation of health promotion at the community level. It is, therefore, pertinent to promote the partnership between the public and private sectors in order to upgrade the overall healthcare delivery and the prevention and control of disease.(MoH, 2011).

Traditional healers also part of the private sector and they offer their services to large sector of the population who turn to them either as alternative health providers or as a supplement to the use of modern healthcare services. These healers services and products range from herbal, spiritual, and minor surgical treatments. The traditional birth attendants also fall under this category of health care and they offer their services to approximately 80% of women who deliver at home (MoH, 2011).

The privately owned subsector which also operates in a not-for-profit manner include hospitals such as Manhal, Gargaar and Edna Adan. They are responsible for the provision of basic and specialized curative services. For example, Manhal hospital has four branches in different parts of the country the main branch being in Hargeisa. Gargaar is fairly new, opening its doors in early 2012, it operates solely in Hargeisa, while Edna University hospital is comparatively older and was the first large private hospital that catered for women's health needs. Based on the observations conducted during this study it should be noted Edna also functions as a training institution which specializes in the training of midwives. It has recently changed its name from Edna Maternity hospital to Edna Adan University Hospital.

The Hospital is one of the largest private hospitals in Hargeisa. Its construction began in 1998 and was completed in 2002 thanks to donations from the various Somaliland communities around the world. It was founded by Edna Aden who is a senior midwife with over 40 years' experience and who served as a former foreign minister in Somaliland. The Hospital started operating with only 25 maternity beds, however, over the years, the hospital services expanded to accommodate more beds and more specialized wards.

## **1.2. RATIONALE OF STUDY**

During the initial process of selecting a topic to write about for the master's thesis, my experiences as a medical doctor have helped me to make my final decision and to choose a topic that has taken me to a barely trodden road. The road turned out to be a long and arduous one, which began during my time working in Somaliland after graduating from medical school in Pakistan in 2007. I had the opportunity of working primarily with women's health in two of the major cities of the country, and I was able to witness first-hand the challenges the women faced due to abject poverty that

reflected in their inability to purchase much needed medicines. I was also able to observe as well as experience the challenges the health professionals confronted due to the lack of proper medical resources. I observed that the perceptions of the women we treated often differed from my own when it came to the context of access to health and the factors which influenced their decision making. Aside from the financial constraints the women and their families' face, the decisions for seeking health care are also shaped by an array of cultural, structural and social determinants that affect the entire process.

Women have numerous health care challenges when they are in their reproductive years, particularly when they are in the process of giving birth to a new life. However, most conditions that recur and play a detrimental role in the mortality of women, could be counted by one hand. Aside from the many conditions causing these complications and claiming the lives of women, there was an unattested observation of an increase in the number of preeclampsia patients seeking health services during the past several years of my work as a physician. Based upon the experiences acquired during the years practising in the country. This steered a desire for an assessment of preeclampsia and inspired the journey of embarking on an in-depth study by means of conducting a scientific research on the understanding of preeclampsia in the country.

Taking into account the lack of a proper systematised recording of actual cases, along with the recognition of the absence of standardised medical policies and guidelines related to the management of illness in general, and preeclampsia in particular, within the health care facilities across Somaliland, I have been prompted to explore the problem from the root of health care provision. I am doing this with the full awareness and appreciation of the magnitude of the challenges faced within hospitals the perceptions and understandings of the health workers. Thus bringing forth the development of the following research questions:

*What are the differences in management between the health workers in the public and private hospital?*

*What are the perceptions and knowledge of preeclampsia and its management among health workers at both public and private hospitals?*

It was also intended to take into account the perceptions of women who utilise these services, and with this intention, the following question was also formulated:

*How do pregnant women perceive preeclampsia?*

However, with the constraints of time and other issues, which shall be mentioned in the limitations section of this thesis, it was unfortunately not possible to acquire this data which would have added an enriched and holistic depiction to the study. The reasons why will be elaborated on in later parts of this thesis. Consequently, the primary focus in this study from the beginning have been on the perceptions of the health workers on the management of preeclampsia.

There is little knowledge of how preeclampsia is managed in the hospitals of Somaliland, and virtually nothing is documented about the challenges health workers face during the provision of that management. Nor is there any information regarding their perceptions, experiences or reflections in relation to their daily work lives. Therefore, this study seeks to provide knowledge of the practices of health workers when it comes to the management of preeclampsia in the hospital by contrasting the public with the private sector. It also seeks to portray the health workers experiences during their management of women with preeclampsia.

A great need for understanding how women with preeclampsia are managed within the confines of the hospitals is required in order to better appreciate the views health workers have concerning the management provide they provide. Currently, no existing data on the subject is available. And as such, it is envisioned that with this study, such an understanding will be reached and the differences in management policies that exist between the public and the private sectors, which form the healthcare framework of Somaliland, will be brought to light.

This study aims to provide the knowledge of the perceptions of health workers and the challenges they face during their management of patients with preeclampsia. With the huge absence of healthcare research in Somaliland, this thesis aspires to inspire and encourage further investigation into the problems faced by health workers dealing with preeclampsia as a life threatening condition that affects women's lives in very difficult circumstances and very limited resources. The study also aims to offer information and modest assistance towards the planning and

evaluation of management policies that concern the health care of women with preeclampsia. And we hope effecting these policies will result in the reduction of the number of lives tragically lost to this condition.

### **1.2.1. OBJECTIVES**

The main objective of this study is to explore the knowledge and perception of health workers on preeclampsia and the management of patients. While the specific objectives are to:

- To assess how patients with preeclampsia and eclampsia are managed in both the public and private sector.
- To explore the barriers and gaps faced by each sector with regards to the management of preeclampsia and eclampsia.
- And to present practical recommendations in improving the management of preeclampsia from the generated findings.

### **1.3. STRUCTURE OF THESIS**

In the following chapter, chapter two, a review of the literature will be presented along with significant concepts and an analytical framework. Afterwards, in the third chapter, an account of how the study was executed through with regard to methodology will be touched upon. The fourth chapter will present the results from the in-depth interviews with the health workers, together with the findings obtained through the observations and the review of records at both hospitals. Chapter five shall cover a discussion of the results with regard to the analytical framework. This will be followed by the final and sixth chapter which will deliver the conclusion along with recommendations for future studies.

## **CHAPTER TWO**

### **2.0. LITERATURE REVIEW**

This section will present a summation of the literature which informed the objectives of the study into the management of preeclampsia patients by health workers in Somaliland. In addition, it will cover the key theories and models utilised throughout the analytical process of the study.

### **2.1. PREECLAMPSIA**

Preeclampsia continues to be one of the leading causes of maternal and perinatal mortality and morbidity globally. This condition is a pregnancy associated disease, which is characterised by the sudden, if not over time, development of hypertension and the presence of protein in urine or proteinuria (Steegers et al. 2010). It is estimated that nearly ten million women across the globe develop preeclampsia every year, 76,000 of whom annually lose their lives to the condition and its related hypertensive disorders. The total sum of perinatal mortality is estimated to be 500,000 per annum (Kuklina et al. 2009).

Despite the presence of preeclampsia, as part of a spectrum of hypertensive disorders in pregnancies, being evident in both developed and developing countries, its adverse outcomes are most particularly felt in the developing countries of the Global South. The risk of a woman from an underdeveloped country developing preeclampsia is about seven times higher than the risk for a woman from a developed country; nearly 10-25% of these women will have died from this disease (WHO, 2007).

Women from regions in the Global South such as sub-Saharan African and South Asia often reside in remote and difficult to access areas. This complicates the access to health care and in some situations limits it. Furthermore, the inadequate number of skilled health care personnel available at the nearest health facilities is a common disadvantageous aggravating factor contributing to the morbidity and mortality of preeclampsia and its related conditions. The World Health Organization (WHO) reported in 2012 that only 46% of the women in developing countries received adequate skilled care during childbirth (WHO, 2012). This indicates that a countless

number of births are unassisted by health workers, which results in complications that often lead to maternal and perinatal mortality.

In 'Preeclampsia', Steeger et al addressed (2010), how the maternal organs would often be prone to excessive amounts of inflammation and endothelial tissue damage, which would affect numerous organs and systems such as the lungs, liver, kidneys, heart and the central nervous system, all of which would lead to higher risk of mortality to both mother and fetus. These complications could also present with perinatal complications and subsequently lead to death. Health workers are consequently advised to take caution in undervaluing the clinical signs and symptoms of preeclampsia and to diagnose the condition as promptly as possible.

It is worth noting that the risk of acquiring preeclampsia can be recognized as a hereditary disorder, under which lies uncertain mechanisms. However, certain hypotheses exist such as that of the preclinical stage. According to Redman (2014), this stage is also symptomless and evolves throughout weeks 8 to 18 of pregnancy. During this stage the circulation to the placenta from the uterus is a remodeling of the spiral artery. When dysfunctional perfusion of the spiral artery into the intervillous space of the placenta occurs an oxidative and hemodynamic stress happens which damages the placenta causing inflammatory factors in the maternal circulation. This theory among others points to the presence of placental abnormalities during the implantation process disrupting the blood circulation and then progressing in stages in which the first stage was comprised of poor placentation and the second stage resulted in a manifestation of the disease into hypertension and proteinuria leading to the development of preeclampsia. However, with the increase in knowledge over the years this hypotheses has become lacking as more understanding of the pathological processes of this condition have been discovered (Redman, 2014).

During the course of researching the literature review for this project, several relevant points related to preeclampsia were identified. One of these findings was the lack of a universal definition of preeclampsia. Another was the existence of numerous definitions for the condition which could result in misunderstandings and confusion obscuring the diagnosis and management of preeclampsia patients, among other issues.

### **2.1.1. DEFINITIONS OF PREECLAMPSIA**

In *Pre-eclampsia: Aetiology and Clinical Practice* (Lyll and Belfort, 2007), the authors asserted that the definition formulated by Davey and MacGillivray in 1988 continued to be the most commonly used definition. This definition states that if a single diastolic blood pressure was greater than or equal to 90 mmHg, or if two consecutive readings 4 hours apart were greater than or equal 90mmHg then preeclampsia could not be diagnosed. The authors go on to compare the previous definition to the International Society for the Study of Hypertension's definition, which claims that the term 'gestational hypertension' should be used for all pregnant hypertensive women, including those who have not been previously diagnosed with hypertension or proteinuria, regardless of the presence of proteinuria. Yet another definition, this time by the National High Blood Pressure Education Programme of Working Group, defines preeclampsia as blood pressure reaching a certain and given threshold of 140/90 mmHg. The main point here being that with all the differences in definitions of preeclampsia that exist it can be unclear which one is the most reliable and accurate one to follow in order to form a diagnosis.

These differences in the definition of preeclampsia are mentioned to emphasise how the management of preeclampsia is focussed on two key components: the accurate measurement of blood pressure and the provision of a reliable and practical means of detecting proteinuria which would lead to a reliable diagnosis. However, in spite of this, the lack of a universally accepted and standardised definition for preeclampsia makes its assessment in developing countries such as Somaliland difficult, which complicates not only its management and outcomes but also the reaching of a diagnosis of the condition in the first place.

### **2.1.2. DIAGNOSIS OF PREECLAMPSIA**

The diagnosis of preeclampsia involves measuring the blood pressure and screening for proteinuria, the medical term for protein in urine, in pregnant women. The availability of protein in the urine is a key diagnostic criteria for preeclampsia since it expands on the explanation of why patients suffering from this condition also develop oedema.



Moreover, Simpson and Creehan (2008) identified that the classification of preeclampsia was based on certain noteworthy symptoms. These symptoms, which may be observed after conducting the lab results, include complaints of cerebral or visual disturbances and epigastric pain, or pain in the region directly under the chest. When severe preeclampsia progresses with seizures and fits, it is then called eclampsia. Another key thing to remember is that just as the classification of preeclampsia can be complicated, the management of this condition can be as well (Christian, A., & Krumwiede, N. , 2013).

### **2.1.3. MANAGEMENT OF PREECLAMPSIA**

In order to accurately manage preeclampsia, guidelines set by either the hospital conducting the management or the Ministry of Health should be followed by health care professionals. Following a strict set of guidelines avoids the provision of substandard care to the patient and aids the health care provider by enabling them to make the prompt decisions required to deliver effective management. (Gillon et al, 2014).

The rationale of a systemic review examining the clinical practice guidelines on the hypertensive disorders of pregnancy (HDPs) suggested by the authors of this systemic review was that there had not been an analysis of the quality of clinical guidelines on preeclampsia which existed regionally and internationally, despite the numerous publications of guidelines on the diagnosis, evaluation and management of the hypertensive disorders of pregnancy. The study reviewed guidelines from the last ten years published in English, French, Dutch and German, which covered the diagnosis, assessment and management of one or more of the HDPs in pregnancy. In the findings, the authors concluded that of the 13 guidelines they identified, inconsistencies were seen for; firstly, the definitions of hypertension, proteinuria, as well as for chronic and gestational hypertension; secondly, for the antihypertensive treatment provided for severe hypertension; thirdly, MgSO<sub>4</sub> administered for eclampsia and severe pre-eclampsia; fourthly, delivery for women with severe preeclampsia or preeclampsia at term, among others.

However, there were significant inconsistencies seen in; firstly, the definitions of preeclampsia and severe preeclampsia; secondly, the target BP for non-severe hypertension; thirdly, the timing of delivery for women with preeclampsia and severe

preeclampsia and; finally, the postpartum monitoring of mothers. This suggested that the existing clinical guidelines of practice, which were currently available on the international field, did have areas of significant consistency which would aid researchers and clinicians alike in developing future guidelines with better standards. Further research investigating the areas where the inconsistencies were found was recommended.

The identification of women with preeclampsia who may be at risk is another challenge with regards to management. This is because the causes of behind the manifestation of preeclampsia remain unclear to this day. While early detection of preeclampsia is possible, limited resources in developing contexts prove to be barriers to detection and providing the right type of management to the right patient (Easterling, 2010).

In another study by Pettit and others (2015), which was quantitative, the maternal outcomes were compared between women in their first months of pregnancy; those who had early onset preeclampsia and those who presented signs of preeclampsia later, and were also full term (Pettit et al., 2015). The study was done to determine whether the full term women with preeclampsia and their foetuses would have better maternal outcomes when compared with women who presented either late pre-term or early-onset preeclampsia. In the study period during 1991-2011, 4657 pregnancies complicated by hypertensive disorders were recorded, out of which 2148 had preeclampsia. Six maternal outcomes were looked at which were: episodes of severe hypertension, proteinuria, acute kidney injury, abnormal liver function, thrombocytopenia and neurological complications. The results concluded that women with late pre-term and those with full term pregnancies with preeclampsia had similar rates of maternal and foetal outcomes. However, when compared to the women with full term pregnancy preeclampsia, in those with early-onset preeclampsia there were similar rates of adverse maternal outcomes, and their babies had considerably increased rates of both morbidity and mortality. This proved that preeclampsia caused drastic maternal organ involvement regardless of the age of gestation during its onset and was a significantly serious maternal disorder.

There was a limitation in the number of the qualitative studies found that were related to the perceptions of health workers concerning the management of

preeclampsia. In contrast, more studies were found that concentrated on the perceptions of women and experiences with preeclampsia.

## **2.2. POWER RELATIONS WITHIN HEALTH CARE**

When health workers have the duty of providing management to their patients, an interchange of interaction takes place amongst the health workers themselves and between them and their patients. Management in itself, when not carried out as best as possible, can lead to the formation of a stressful environment and such an environment can result in conflict. Although conflict can at times lead to positive outcomes, it often produces a negative effect. This can be due to existing power relations and dynamics, which can negatively affect not only the quality of management, but also the job satisfaction of the health workers and their overall wellbeing (Patton, 2014 ).

When conflicts arise in the work environment, it is due not only to differences in opinions, but the criticism of those in power positions by the workers, particularly when power is exercised over them in manners they find problematic. As Foucault explains (1982), in 'The Subject and Power'; “they do not look for the ‘chief enemy’ but for the immediate enemy. Nor do they expect to find a solution to their problem at a future date” (p. 780). When Foucault's assertion is applied to the medical profession, an unrestrained power dynamic over people's bodies, health, life and death emerges and presents a struggle between individuals within the profession or organisation to deliver the best possible care for their patients. Foucault further stresses that the effects of one's power are often connected to one's knowledge, competence and qualification and this may be the reason behind why doctors who are more extensively educated in the number of years and training regard themselves in a higher stature than the nurses (Foucault, 1982).

### **2.2.1. HIERARCHY AND CONFLICT**

In professional health care, a hierarchy of power exists where some positions are more respected and thus more influential than others due to requiring more extensive periods of training. This hierarchy can also be distinguished between the different providers of health care. However, the disparity in the medical profession is pronounced in some developing countries. With doctors, of varying levels in the power hierarchy, exercising full control over the management of patients in the wards

while the nurses do not have that capacity particularly in the government run hospital.

This however is not an uncommon phenomenon. It has been noted that physicians have held a position of prominence, distinguished by their long white lab coats since the early 19<sup>th</sup> century. The attire was first adopted by the medical profession as a model representation of the physician as a scientist. Subsequently, a tension has emerged between the white coat's role as a symbol of status and profession and its use in demarcating a clear-cut separation between the physicians, their patients and other health professionals within the hospital (Schocken et al. 2013).

In 'A Changing Culture of a Hospital: From Hierarchy to Networked Community', Bate raises the point that within a healthcare system, the different professional factions adopt a 'tribal' outlook with each faction dedicating themselves to winning gains for their tribe. The participants in this ethnographic study demonstrated this point by reiterating that tribal relations did exist and were in play. Moreover, they stated that they thought of themselves as antagonists and rivals. Tribalism was found to be an innate, intrinsic and indissoluble part of the professional processes within the hospital, a result of the mixed nature of health care and the apparent materialisation of the differences among the professional groups which functioned within the medical setting (Bate, 2000). Conflict is therefore unavoidable when different forms of management exist, and this can ultimately lead to a 'culture of blame' between the tribes in the medical profession (Bate, 2000).

According to Schocken et al.(2013), the resolution of conflict or tensions between the different health professionals in the workplace lies in the reduction of clear visual distinctions in the work roles and the engenderment of better inter-professional understanding and respect. This could be achieved through training and educational interventions, which have been encouraged and promoted by the WHO since 1978 with the belief that it would lead to an improvement in inter-professional communication and subsequently better teamwork (Schocken et al., June 2013).

### **2.2.2. BLURRED JOB BOUNDARIES**

In a literature review on the conflict in health care it was expounded on how the dynamics which take place in the medical profession can result in unclear

differences regarding which professional may be responsible in performing a certain role when making decisions related to the management process. This could lead to a disagreement over the plan of management to be chosen for the patient (Patton, 2014 ).

Furthermore, this blurred boundary in work practices is more common between the nurses and doctors. It can result in conflicts specifically when high ranking nurses feel undervalued or demeaned by doctors. This occurs in situations where the nurses have feel a degree of closeness with the patients they are managing since they provide more one-on-one care than the attending doctors do.

### **2.2.3. THE IMPORTANCE OF COMMUNICATION**

The literature review on conflict in health care also mentioned numerous studies, which raise communication or the lack thereof as being a reason behind the professional struggles which takes place in the medical setting. Communication was seen as a main source of interpersonal conflict between nurses when there was an element of inadequate communication present.

Other studies in this literature review also stated that some researchers pointed to the relevance of communication styles and how conflict would be created when both verbal and non-verbal cues were misinterpreted in the work place. This was frequently evident in high stress environments, which led to conflict induced by poor verbal communication. It was also emphasised in other studies that non-verbal cues such as ignoring, certain facial expressions and even the negative body language of health workers could trigger conflict (Patton, 2014).

It was also recommended that for the resolution of conflicts between professionals to occur, managers had the duty of identifying the source of conflict before addressing it by carefully listening to all sides involved. Other strategies to reduce interpersonal conflict among health workers that were provided were: to increase the morale, to introduce strict policies against negative behaviour towards the nurses, and to encourage nurses to report abuse they may have felt as soon as it took place, to educate the entire staff on the policies introduced, and finally to offer obligatory counselling. Another study within this literature review regarding conflict focused on doctor-nurse conflict in Greece and suggested conflict management education for

both doctors and nurses to resolve conflicts in the work place. They recommended a basic course aimed at achieving the early resolution of conflicts by means of negotiation, mediation and the utilisation of various creative problem-solving techniques (Patton, 2014 ).

The main limitation of this literature review on conflict in health care was that the findings reported in the studies cited within the discussion are self-reported. There was an emphasis on the need for future research studies which included methods such as observation and interviews as part of the research process to further solidify the findings attained. There was also mention of a large literature gap related to the resolution of conflict-training among health care professionals. Education was the key component in the studies reviewed.

The points raised here express the need that in order for adequate performance and the smooth delivery of preeclampsia patient management to occur within a health care setting, the players involved need to communicate effectively. Furthermore, health workers must show respect and have a clear understanding of their roles and expectations to deliver the best management to the preeclampsia patient under their care.

## **CHAPTER THREE**

### **3.0 METHODOLOGY**

This chapter will centre on how the study was executed. It will begin by introducing the methodology which was used for the collection of data before presenting a description of the study sites, how access to those sites was made and how the sampling process was carried out. The following section will examine reflexivity before discussing the trustworthiness of the study. A deliberation of the ethical considerations will then precede an illustration of the methods used in the analysis of data. Finally, it will conclude with a brief account of how the results intend to be disseminated.

### **3.1 STUDY DESIGN**

The design of this study utilises an explorative and descriptive approach where data is generated by means of identifying and documenting the phenomenon which existed within a certain point in time and at two particular sites (Marshall C., 1999). This method falls within the field of qualitative research and emphasises that the researcher is the tool from which the research process begins. As Johnson (1995) explicates, the aim of any qualitative research is to “engage in research that probes for deeper understanding rather than examining surface features” (Johnson S.D., 1995, p.4). It is a result of this process that the researcher acquires information concerning actions and interactions of the health workers, and reflects on the significance of this information by applying a series of evaluations and analyses.

This process gives rise to interpretative conclusions (Marshall C., 1999), which may then be taken into account according to the context that is being studied. It is essential to distinguish between method and methodology during this process. While the method applies to “the how” of data collection, the methodology relates to “why” data is collected in that particular manner (Kaplan, 1964).

The perceptions of health and management are subjective and dependent on socio-political and cultural contexts of existence. Consequently, the distinctiveness of individuals, within a certain context, is focused upon to achieve a better understanding of the structures influencing the seeking of health-care and its

management. It is for this reason that a qualitative method was thought to be the most appropriate approach by the author to acquire a thorough understanding of the perceptions of health workers in Somaliland towards the management of women with preeclampsia in the hospital settings.

The data was collected by way of participant observation, the review of hospital records at both study sites and interviews employing the use of a semi-structured interview guide. This was a necessary process since it placed the phenomenon under study into perspective, from diverse angles with the intention of accounting for its multifaceted nature. It reaffirms the importance of O'Donoghue and Punch (2003)'s triangulation method, utilized in such studies, since the technique of cross-checking data from many sources serves to search for consistencies within research data, and in doing so provides a nuanced view of the data in its entirety. For instance, the use of open-ended questions in the interviews was instrumental in better understanding the perceptions of the health workers (doctors, nurses and midwives) on both their general views on health provision and on their specific views relating to their work managing patients with preeclampsia.

### **3.2 THE STUDY SITES, ACCESS AND SAMPLING**

#### **3.2.1 THE STUDY SITE**

The first study site is Hargeisa Group Hospital, the largest government-run hospital in Somaliland which receives referrals from all over the country. Established in 1953, the hospital was built to serve a population approximating 30,000 people. Today, however, it caters to a population exceeding a million, comprising chiefly of people from the city and its outlying areas. The hospital has four departments, which are the medicine, pediatrics, OBGYN (Obstetrics & Gynecology) and surgery departments. It has a total of 400 beds.

Many sections of Hargeisa Group Hospital have not been modernized since the 1950s, which presents challenges to health-care provision when considered with the increased patient numbers. Moreover, with regards to the management of Hargeisa Group Hospital, inefficient organisation and the absence of a hierarchical system within the medical framework often generates uncertainty in duty among the health workers.



Based on the observations carried out during the study, it has come to light that Hargeisa Group Hospital also serves as a teaching hospital for student medical doctors to undertake the management of patients during the final year of their studies and internships.

The second study site is Edna Adan University Hospital, one of the largest private hospitals in Hargeisa. It was founded by Edna Aden, a senior midwife with over 40 years of medical experience, who is also the former Somaliland Minister of Foreign Affairs. The hospital's construction, which began in 1998 and concluded in 2002, was supported by donations from various Somaliland communities around the world.

The hospital started operating with just 25 maternity beds, however, its services have expanded over the years to hold more beds and establish specialized wards such as the internal medicine, pediatrics and surgery wards. It now commonly serves as a referral hospital for obstetrical emergencies.

It was noted in the observation carried out during the study period that the hospital functions according to strict standards of hygiene. At the maternity ward, health-care services were mainly provided by qualified midwifery health workers and midwifery students. The hospital has also recently begun to operate as a teaching hospital with the aim of creating future the midwives and nurses of the country.

The rationale behind the choosing of these two sites for this study was that both were the two largest referral hospitals within the city of Hargeisa and women from the surrounding areas sought their services.

### **3.2.2 ACCESS**

The study commenced on September 7, 2014 at Hargeisa Group Hospital (HGH) after it was approved by both of the study sites. With the assistance of a local supervisor, the dean of the University of Hargeisa's medical facility, the author submitted the project proposal to the director of Hargeisa Group Hospital. This study was approved following an explanation of the project. The local supervisor then accompanied the researcher to the study site and introduced the head doctor of the maternity ward, an overseas graduate gynaecologist. Thereafter, the head doctor introduced the ward's staff and a presentation of the research project was provided subsequently.

After the study at HGH was completed, there was a meeting with the hospital director at Edna Adan Hospital to deliver the project proposal and elucidate on the nature of the research. The director, who had been abdicating the post at the time, was welcoming of the project and forwarded the proposal to the hospital administer who was informed to aid in the facilitation of the project by whichever means needed. The administer later provided a tour of the hospital giving details of each facility and the number of patients and staff they currently had and introduced the staff where a brief explanation of the project was given.

### **3.2.3 THE RESEARCH PARTICIPANTS**

The central focus of this study is the health workers who are responsible for the delivery of management by providing the necessary means of health-care and best possible practice in the care of preeclampsia patients. Contact had been made with the health workers who had been working at the designated study sites: the maternity ward at Edna Hospital and the gyno 1 ward (as it is referred to by staff) at Hargeisa Group Hospital.

**Inclusion criteria:** Nurses, midwives, and doctors as well as student doctors working at the maternity ward of both hospitals who have admitted and managed patients with preeclampsia. The student doctors were included in the study because they managed the patients in the ward.

**Exclusion criteria:** Student midwives and auxiliary nurses since they are under training and support basis and do not have the capacity for admitting or treating preeclampsia patients.

### **3.2.4 SAMPLING**

The selection of research participants is determined on their ability to provide descriptive and enriching information on the issue under study. This means of selection is regarded to be a purposive means of sampling (Patton, 1990). It enables the participants to reflect on the research topic, thereby allowing for germane and detailed data to be collected.

Sampling is not related to numbers in qualitative studies. Numbers are not essential in ensuring whether the information acquired from participants is sufficient or satisfactory enough. Quantitative concepts of the power of the study in relation to

numbers do not exist, and adequacy in sampling is relative so long as the saturation of data and the “quality” of the information is reached (Sandelowski, 1995). The number of participants in the study were, according to the saturation of information, attained during the interviews. Data collection and analysis was undertaken throughout the collection process and saturation was reached when no further new knowledge was received.

The sampling approach, deliberate in nature, was carefully crafted according to the purposive selection of the two study sites. Various health care providers i.e. midwives, young male doctors and nurses working at the maternity department of each of the data collection sites were interviewed. As previously mentioned, the health care system in Somaliland does not currently possess a globally recognized medical hierarchy. Upon graduation from medical school, the doctors’ next step is to embark on internships. However, there exists no further opportunities for professional development upon the completion of these internships. As such, there are very few specialists working within the medical health care system at this time.

The doctors interviewed were mostly final year student doctors who were given the task of managing the patients at the maternal complications ward during their rotation, which lasted 2 months.

Two groups changed rotation during the timeframe of the study. The interviews were conducted with the first group who had begun their rotation as the researcher commenced the study. An intern doctor, who had started their duty at the ward weeks before the study at the site concluded, was also interviewed.

A total of 12 health workers at Hargeisa Group Hospital had agreed to participate in this study, however 8 arrived for the interviews. It is unfortunate that the doctors, who were post-internship, who had consented to take part in the study when approached by the researcher, yet did not show up during the interview phase; their perceptions would have been significant considering the length of their work experience at the ward. At Edna Hospital, 10 health workers were presented with consent forms, 8 of whom displayed interest in being interviewed. One of the people uninterested in the research project was one of two doctors working in the maternity ward.

The study sample was composed of 16 health care providers: 8 health workers at HGH, an intern doctor, 4 student doctors, 2 midwives and 1 nurse. At Edna Hospital, the 8 health workers who were interviewed were all midwives with varying degrees of experience.

### **3.3. DATA COLLECTION**

The process of data collection began on the 6<sup>th</sup> of September, 2014 and continued until the 31<sup>st</sup> of December, 2014. Data was gathered by means of observations, reviews of patients' records, participatory observation, informal conversations and interviews with the respondents using a semi-structured interview guide, which contained probes for information and opened-ended questions.

#### **3.3.1 PARTICIPANT OBSERVATION**

Direct observation, on the whole, provides a firsthand depiction of the behaviour of participants under study, and is consequently more accurate than secondary reports on their behaviour would be. However, there is a disadvantage to be noted; the observer may be biased by their own expectations of what it is they are actually seeking to find (Bernard, 2006, p. 435).

Conversely, Hammersley & Atkinson argue that “all social research is of participant observation because we cannot study the social world without being a part of it” (1983, p. 249). The researcher must, therefore, actively monitor their subject(s), which in this study's case involves accounting for any differences between what people do and what people say they do since these can often be very different. For instance, participants may choose to modify their mannerisms in an effort to project a particular favourable image? when they may be aware they are under observation. That said, this effect passes over time as they grow accustomed to the researcher's presence among them.

Utilisation of participant observation at the two hospitals was crucial in determining how patients with preeclampsia were managed by the health-care providers. Moreover, it allowed the researcher to witness the dynamics which existed between health-care providers and their clients. Through this process, a clearer

understanding emerged of the interactions that existed amongst the health workers to their surroundings and the patients they managed.

Supplies were also inspected with, the aid of a pre-designed checklist, to check the inventory of supplies and drugs at the maternity ward during the observation phase of the study.

### **3.3.2. INTERVIEWS**

Initially contact was made with the prospective research participants by introducing the project, seeking their approval for participation and later requesting their consent once approval was received. The interviews were sought out to ascertain the perceptions of the health-care providers on the challenges and issues they face in their daily management of patients with preeclampsia.

The questions asked during the interviews were devised with the help of an interview guide created beforehand. The interviews were audiotaped with the consent of the participants. Recruits for the interviews were selected after an initial meeting where the project description, informing the health workers of the study, was presented the agreement and consent of the respondents was obtained. The researcher exercised patience and flexibility throughout the interview taking process. Participants, for instance, were asked to participate in the interviews during their work hours. On many occasions when workloads were high, scheduled interviews would be pushed back to another day. The participants were given the liberty to suggest appropriate rooms to be interviewed in since space and private rooms were limited at both study sites.

Some of the interviews were conducted in private rooms within the work area, whenever they were available. Private rooms were used to maintain the privacy of participants and provide them with the space to speak freely. The room used at Hargeisa Group Hospital was the rest room the nursing staff; the researcher secured permission to use the room before any participants were ready to be interviewed.

At Edna Hospital, one of the interviews was conducted in the surgical storage room at the operating theatre since the participant had been on duty that evening. Another interview was taken in a private room at the Outpatient Department where the participant had been working that morning. Four interviews were conducted at the

Neonatal Intensive Care Unit because it was the least busy and most private room available; the participants had themselves suggested it for use. Finally, the last two interviews were conducted at the midwives' rest station, at the participant's request, due to the lack of mobility created within the maternity ward by a busy evening shift.

### **3.3.3. INTERVIEW GUIDE**

The use of a guide during the interview taking process is beneficial, particularly in instances where the researcher may not find another opportunity to interview their participants or when many other interviews are pursued to collect data. The interview guide additionally allows for the provision of reliable data according to the quality and format of the questions devised prior to interviewing (Bernard, 2006).

In the initial planning stages of this study, an interview guide (see Appendix IV) was created and later improved during the fieldwork process; the list of pre-planned questions was categorised in a systematic manner according to the issues that were to be addressed in interviews with health-care providers of patients with preeclampsia. The utilisation of the semi-structured interview guide provided a generated a flow for an open yet focused two-way communication which was useful to the study in bringing forth more illuminating discussion. The researcher followed the guide for most of the interviews, yet left room to pursue topical trajectories that diverged from the format of the guide when the information provided was of interest.

The interview guide was pretested before it was used in the interviews, which allowed for necessary modifications to be implemented. Moreover, it gave the researcher a sense of the dynamics that exist within an interview setting by providing further insights into which areas of the guide required attention or elaboration.

### **3.3.4. REVIEW OF RECORDS**

A review of all the patient files and hospital records was carried out during the data collection process with the aim of reviewing all the case notes of patients with preeclampsia admitted to both hospitals. This was done during the course of the study period to determine the burden of preeclampsia at each hospital and to assess the management provided before establishing whether any differences were evident in how the patients were managed at the hospitals.

### **3.3.5. INFORMATION MEETINGS AND INFORMED CONSENT FORM**

Information meetings were briefly conducted at both study sites during the first day of the researcher's study? while extensive meetings were held after the observation phase and in the preparation of the interview period. Informed consent forms (see Appendix V) were distributed to the participants along with a more thorough explanation of the research project was given. The consent forms were translated into the Somali language with the help of a translator and the translations were examined by the researcher to ensure the accuracy of the terms.

At Hargeisa Group Hospital, with the assistance of the head doctor of Gyno 1 ward, the staff and student doctors at the ward were gathered to attend an information meeting on the study during the project's first day. Another meeting was called by the researcher, in preparation of the interview phase of the study, a month and a half later after the local ethical approval had been acquired. The attending participants had asked questions and those who expressed interest were given consent forms to take and read at home. Before the interviews began, each participant who came forward was asked if they had any questions regarding the form or the overall study.

Similarly, a brief information meeting was conducted at Edna Hospital by the hospital administer after he had taken the researcher on a tour of the entire hospital. The hospital administer then introduced the staff to the researcher who then presented information about the research project to them. The staff were once again was informed about the study when consent forms were submitted to participants who had expressed an interest. They were asked to go through the forms at home. The staff who came forward were asked if they had any questions relating to the form or the study before the interviews were carried out.

### **3.3.6. THE USE OF A TAPE RECORDER**

A tape recorder was employed during the interview taking process and participants were informed of its use in the interviews. Participants were once again made aware that the interviews would be recorded before any interview was commenced. The effect of this was three-fold: firstly, the researcher offered comprehensive explanations to ensure no misunderstandings about the nature of the interviews existed on the part of the participants; secondly, the participants were apprised of the

researcher's need to later refer to and transcribe the data collected from the interviews; and lastly, the participants were informed that any information they gave would not be used in any form to harm them in their place of work since no names or addresses would be used as the final findings would be presented to maintain complete anonymity.

### **3.4. REFLEXIVITY**

Awareness, being critical of one's self and the search for alternative theories to be explored during the research process is an integral part of the journey of acquiring information. This ability to reflect over each step that has taken place and critically analyse why and how it has aided in the course thus far is the process known as reflexivity (Marshall, 2010).

The findings collected from the study are a form of analysis, however it is important to recognise that during the entire development of the research method, the researcher in qualitative studies is regarded as being a tool in the data collection and analysis. Their viewpoints and how they, the researcher, "saw" or perceived things are the perspectives which may not hold any similarities to the conclusions provided by others should they conduct the exact same research within the a similar context. Moreover, as Patton (1999) eloquently states, "different people will see different things", alluding to how complex socio-economic, political and cultural factors shape people's perceptions, biases and interests. This study, as such, cannot claim not to engage a subjective process and it should be noted that an awareness of this subjectivity by the researcher may not lead to the discovery of the truth when considering the views of its participants.

What is seen oftentimes results from what one is looking to find. Consequently, it is likely that the observations and interpretations of the situations which transpired may not necessarily match those of the participants and their understanding of the same concerns. This may be, in part, due to the status of the researcher as a "third culture child", who grew up in different countries and experienced multiple diverse cultures, or the researcher's international educational background, which provided an outsider's perspective that surmounted years of work experience within Somaliland. This could be reinforced by fact that the study participants themselves may have considered the researcher an outsider as well. However, the shared health worker



background may have engendered a sense of closeness with the participants with whom the researcher also shared a religious background and a knowledge of the local language. This could have helped create an affinity and reduced any differences which may have otherwise been present, potentially resulting from the researcher's inability to speak as fluently as local native speakers of the Somali language.

An aspect that played a key role throughout the planning and execution stages of this study was that the researcher had previously worked at Hargeisa Group Hospital. This familiarity with the hospital setting and the dynamics that existed within the health-care facility proved useful when reintroduced to them as an researcher since it enabled me to do my work more efficiently. As a consequence of the knowledge and experience gained from the International community health Masters' programme, the researcher was able to appreciate the events which occurred in better understanding of the research process and to observe the participants with an objective eye.

There were, however, a number of challenges that emerged during the length of the study. One of these was a prevalent expectation among some of the health workers that the researcher would financial incentives since she had returned from studying a Masters degree in a European country. To give some background information, it is common for international organisations to provide per diems in exchange for seminar attendance in Hargeisa. The researcher resolved this issue by providing a thorough explanation of the nature of the project i.e. being a masters student conducting a thesis generating research study. Gratitude for their time and participation, however, was provided by means of simple refreshments made available during the interviews.

It is also important to highlight that there had also been an intention to investigate the patient of preeclampsia's perspective in this study, as previously mentioned, since they are the receivers of management. A formulation the questions to be asked of them were made. However, unfortunately this was not feasible for two reasons.

Firstly, during the conduction process of an interview of one patient it was noted as Alicia Ely Yamin, a lecturer on Global health at Havard, so appropriately articulated in the GLOBVAC conference 2015 in March, *"If you ask women within the confines*

*of the hospital how they were treated, they would almost always say they were treated well even if they were treated badly. But if you ask them in six weeks, their answers would be very much different.”* And this, the part of being treated well, was what precisely occurred with the interview of that first and only patient.

Secondly, there was the time factor to consider, and there had not been enough time to do so. Particularly after considering how challenging it had been to acquire the interviews from the health workers. Both student doctors and the midwives at the public hospital. Considering this, it was understood later on that more time would be required to further pursue this perspective as well specifically after that not so informative interview with that one patient. And thus, a limitation of this study is that it does not demonstrate the patient's perspectives towards management and therefore does not provide the holistic depiction of the dynamics that occur during the management process.

### **3.5. TRUSTWORTHINESS AND CREDIBILITY**

The aim of this study was never to arrive at a single truth. The measures of validity and reliability used in quantitative studies will, therefore, not be utilised in this qualitative study. The concept of trustworthiness, however, will be. Trustworthiness is the process of assessing the rigour of a study by means of utilising such measures as credibility, transferability, dependability and confirmability (Guba and Lincoln, 1994). This permits the use of the approach in a manner that appreciates the way it is applied within a context of a social world which is constantly evolving.

The qualitative researcher shoulders the responsibility of rationally considering the study problem, of making an evaluation of how to manage that problem and then striving to reach the best possible way of monitoring the effects that would result in the outcome (Patton, 1999). Credibility is thus achieved by the submission of the research findings to the participants of the study and, in doing so, enabling them to offer feedback on the interpretations the researcher has made as well as checking their own interpretations (Lincoln and Guba, 1986).

This issue was addressed to a degree during the one-on-one interview sessions with the participants where they had the opportunity to raise any concerns and ask questions if they needed further clarification on the contents of the information

meetings and consent forms. A majority of the participants expressed great curiosity in finding out about what would happen after the researcher had collected the data while others inquired about the use of the consent form when oral consent was already provided. The latter point illustrates how Somaliland is predominantly an oral society, which has proved challenging for many particularly when it comes to writing down matters of importance. To ensure the credibility of the study, triangulation had been used in methods of data collection which were observation, the review of patient records, the utilisation of a checklist for inventory and in-depth interviews.

Trustworthiness should also be founded on what the participants are willing to disclose and how they choose to impart that information (Lincoln and Guba, 1986). The participants each had reasons for participating in the study and by sharing this information they disclosed has the possibility of it being what they may have thought to be what I would like to hear. Having said that, they also expressed a desire to share their own experiences, and in a sense, justify their actions. Perhaps the nurses and midwives in this study may have felt the need to explain things because of the researcher's status as a doctor; and as a means of achieving a degree of sympathy if not empathy for the realities of their work on the maternity ward.

Throughout the interview process, the researcher continually checked with the participants to confirm whether their words were clearly understood: participants were asked to repeat some words they mentioned or asked to clarify certain statements. Furthermore, after every interview, the researcher contemplated and made notes on the statements in the endeavour to make sense of the data before the transcription process.

### **3.5.1. TRANSFERABILITY**

Transferability is the provision of a detailed account of the research process, which presents others with the opportunity to appraise the relevance of applications of findings achieved within one context into that of another context (Lincoln and Guba, 1986). The sample of this study was a small one; the leading objective was to contextualise the experiences that other health workers may identify with. And as

such, it cannot be used to apply generalisations to a larger study population within a similar context.

### **3.5.2. CONFIRMABILITY**

The degree of neutrality which has been achieved in the research process is known as confirmability. Confirmability can refer to level to which the findings in the study were moulded by the participants and not by the bias of the researcher or self-interest (Lincoln and Guba, 1986). As previously mentioned, research projects are not impervious to the influence of the researcher's unique viewpoints. Reflexivity, as a consequence, is the appropriate approach to ensure that the researcher is self-aware of their input while conducting the research. This acts as a safeguard against influencing the research process, which maintains objectivity, confirming how imperative a tool reflexivity is in validating the study (Patton, 1999).

The findings and discussion sections of this study were based on factors the researcher found significant to illuminate; they provide answers to and elaborations on the research questions. Lastly, it is worth stating that throughout this entire process of undertaking this research, supervision from experienced researchers has been valuable to the researcher.

### **3.5.3. DEPENDABILITY**

Dependability is the process of determining whether it is possible to exhibit a recurrence of the findings and outcome of the study, if they were to be measured again, and if those findings are consistent when repeated (Lincoln and Guba, 1986). This process can be compared to external validity, which is applied in quantitative studies, however, such replication is not achievable in qualitative research that takes the contexts of a unique and evolving social world under study. Dependability is therefore used within the qualitative framework to provide understanding of the stages explored throughout the research process in the contexts they had occurred in. This is realized by providing transparency within each of the steps implemented during the research process.

In this study, the process that was taken to generate the findings may be applied within a similar context. Although the findings may not necessarily prove to be the

same given the fact that every context has its own factors shaping it and that the researcher, who was main instrument in the data collection, would be a missing component as well.

### **3.6. ETHICAL CONSIDERATIONS**

The Declaration of Helsinki clearly states that the interests and wellbeing of human subjects should be taken into account first and foremost above the interests of science and society, and that all research should be preceded by a complete and thorough assessment of the risks that could be incurred and compared with the probable benefits the subjects or others in society (WHO, 1996). Therefore, it is the ethical obligation and requirement of every researcher to protect the interests of his research participants from any related misconduct which they may be experience from their organizations (Collumbien et al, 2012).

This study received its approval from the De Nasjonale Forskningsetiske Komiteer, or the Regional Ethics Committee (REK), in Norway in June 2014. Thereafter, an application for permission to conduct the study was made to Ministry of Health in Somaliland was made in August before approval to proceed with the research was finally granted in October 2014. Upon return from fieldwork and by request from the University of Oslo, an application was also made to the Norsk Samfunnsvitenskapelig Datatjeneste or the Norwegian Social Science Data Services (NSD). Approval from the NSD was narrowly received a few days prior to the submission date of this thesis.

#### **3.6.1. INFORMED CONSENT**

Informed consent is an integral method of safe-guarding research participants from any manner of unethical treatment. It is the reason ethical review boards and committees exist, and researchers are required to submit research proposals to such institutions before they commence their research projects. It is therefore paramount that the researcher considers the value of any research they undertake to ensure it is beneficial to all parties concerned. In order to accomplish this, an appropriate study design must be conceptualised and the full informed consent of participants should be obtained. Furthermore, collaborative efforts between the investigators, review

boards and individuals with research expertise should facilitate the study designs to ensure they are socially scientifically valid and ethically suitable (Mastroianni et al, 1994).

It was important to guarantee that the participants understood they were free to drop out at any moment if they chose to and were reminded of this before and after the interviews. Both oral and written manners of seeking consent were employed throughout the duration of the study. Written informed consent was given to the participants at the information meeting before another explanation of their role and the research project was presented to every participant before the interview. This served to ensure that participants were informed of their choice to not participate, taking into account that informed consent is a continuous voluntary process and not an obligatory act. Many of the participants were not used to this manner of consent-seeking and were curious, inquiring about why they were consistently being asked for consent when they had already given their consent at the information meeting. The researcher explained the importance of consent in the researchy study in a manner which emphasised their participation as optional and not obligatory.

### **3.6.2. RISKS AND BENEFITS**

The intended benefits of this study will cover at three primary levels: the individual, the societal and the policy-making level. At the individual level, it is envisioned that the study will assist the health-care workers at both hospitals in deliberating on their management practices in addition to helping them identify any present shortcomings affecting the provision of better health-care services to mothers with preeclampsia. At the societal level, the study aims to raise awareness of preeclampsia and the effects of its management; it is intended that this will bolster positive health-seeking behaviour and reduce the morbidity and mortality issues related to precclampsia. Finally, on the policy making level, the study proposes to inform policy-makers and leading authorities on the aspects of the management of preeclampsia patients which require improvement in both public and private hospitals.

A risk which may be prudent to consider is the possibility, however miniscule, of the participants being identified by the statements they made, despite omitting any identifying details (with the exclusion of their profession). The samples at both sites were small and the study was conducted within a single ward of each hospital,

creating a potential for a breach in the study's anonymity to occur. Consequently, it must be acknowledged that the participants may be reprimanded by the hospital administrations or that they may experience conflict with their management bodies. That said, having worked at hospital for the past four years, the researcher has seen little to no cautions given by the administration when the health workers voiced their opinions on the realities of their work.

### **3.6.3. CONFIDENTIALITY AND ANONYMITY**

The principle of confidentiality must be addressed to avoid any possible recognition of the participants in the study through the data they provided. Thus, the respondents will be referred to according to their position or title of work (doctor including intern or student doctors, nurse and midwife) throughout the thesis and will be assigned a number by the researcher. Participants will additionally be differentiated by where they worked e.g. HGH doctor #3 or Edna midwife #5. All participants were not asked any information that directly revealed their identities such as their names during the interview process. These practices were employed to ensure that utmost anonymity of the participants was achieved by preventing any connections to the data supplied by the individuals themselves. Lastly, the data supplied by the participants was stored on a password protected computer, which could only be accessed by the researcher.

### **3.7. DATA ANALYSIS**

The data was analysed by means of a systematic text condensation process, which allows for a descriptive and explorative method of analysis of the themes generated from the data collected through various means such as observations and interviews (Malterud, 2012). Analysis of data is a continuous process that is not limited to the data collection period, but must carry on afterwards (Patton, 1990). The data is to be examined as a whole during the first step of the analysis process. This helps the researcher gain a familiarity of their research project and decreases their influence on the material, as Giorgi's phenomenological analysis approach (Malterud, 2012) deftly describes. The next step is to extract the catchwords from the different texts from interviews such as; the management which had taken place or the challenges experienced, Ilaj or traditional medicine and finally the knowledge of preeclampsia.

All the catchwords are later used to highlight any emergent themes when the researcher returns to review the recorded interview data. Finally, the five key themes to emerge from the interviews after a stringent process of elimination are employed to be used in final product of the thesis.

The researcher would like to note she has no prior experience undertaking qualitative research, and as such it may be likely that the course taken in the analysis process may not have been as systemic as Malterud described.

### **3.8. STORING OF COLLECTED DATA**

The data obtained during this study was stored on a computer that was password protected and was kept with the researcher along with the other documents obtained during the field work process. The participants were then assigned codes such as HGH doctor 05 or Edna midwife 08 when the audio recordings were transcribed to avoid the direct identification of individuals.

### **3.9. DISSEMINATION OF RESULTS**

The findings produced from this thesis will be distributed to the Ministry of Health in Somaliland by means of a dissemination seminar. The participants of the study and stakeholders within the maternal health field will be invited to attend to view and discuss the results and recommendations. It is the researcher's intention to create a shorter form of thesis to be translated into the local Somali language and distributed to the hospitals where the study was conducted. The researcher ultimately plans to rework this master thesis into an article for publication.



## **CHAPTER FOUR**

### **4.0. THE FINDINGS**

In this part of the thesis, the findings will be discussed by a presentation of an introduction to the study; followed by the presentation of the findings from the interviews. And finally a summary of the findings made through the other methods of data collection at both study sites, which were participant observation, the review of records and the checking of inventory by means of a checklist. The analysis of the findings in this study have been organised and presented through the provision of narratives from the study participants followed by brief descriptions to further illustrate them. This was prepared in following manner in order to achieve a balance between the obligation of reporting the findings scientifically and to also present them in the artistic expression by the author in painting the picture of the context under study (Sandelowski, 1994).

### **4.1. OVERVIEW OF MAIN FINDINGS**

Health workers have the responsibility of caring for their patients by providing the management those patients require of them, despite the conditions in which they may find themselves working within. It is in the difference of these working conditions that aid in the explanation of the dissimilarity between the management styles of the patients with preeclampsia in the hospitals of this study. It is particularly true when a woman with preeclampsia may suddenly be admitted in an unconscious state to a hospital. A state that swiftly manifests into the woman soon developing sharp convulsions and biting her tongue.

In such a scenario, time is of the essence and health workers, regardless of the institution they work for, are called upon to use sound judgment and prompt action. In order to save the life of the patient which they are now held accountable for. The difference however, lies in the resources, or lack thereof, that the health workers in the public hospital have as opposed to those in the private hospital. To this end, the challenges and trials of management faced by either side are thus subsequently brought to light.

The end result for both hospitals is the same; to save the life of the patient and prevent her from becoming yet another number added to the maternal mortality rate. During the duration of this study, four women had died from complications of preeclampsia and eclampsia. One in the private hospital a week into the start of the observation period there and three women in the public hospital.

## **4.2. FINDINGS FROM INTERVIEWS**

### **4.2.1. THE PUBLIC HOSPITAL**

In this study, the health workers in the public hospital had opposing views when asked about the management of patients with preeclampsia, the challenges they faced and the needs they felt were importance to be addressed by the administrative bodies of the hospital. Four of the health workers interviewed in this study were medical students in their final year. There were two midwives and one nurse as well as an intern doctor. The nursing staff referred to the medical students as, 'student doctors' since they were expected to carry out the management of patients

Analysis of the overall interviews from public and private hospital generated five themes which included: we know but they don't; entry ways into management care; struggles of management; sense of credibility and commitment in the work place; and the way forward. The interviews from which these themes emerged will now be compared between the two hospitals, beginning with the public hospital first followed by the private hospital.

#### **• WE KNOW BUT THEY DON'T**

Once the health workers were asked, what does preeclampsia mean to you? All those who worked at Hargeisa Group hospital expressed a great familiarity and understanding of the condition by providing a textbook definition of it. As well as mentioning how it is managed and the dangers the condition can lead to when left unmanaged. As this nurse expressed, preeclampsia as being:

*Preeclampsia is a condition that some pregnant experience when they have hypertension, i.e. when their blood pressure goes beyond the normal rate and reaches 140/90 and above. And if they take urine tests, their urine shows*

*proteinuria. They also show symptoms such as, stomach pains and distorted vision. The fetus also experiences distress. – HGH Nurse 07*

By contrast, when they were asked if the women who came to the hospital with the condition had any knowledge or idea about their having preeclampsia beforehand, the health workers views were mostly negative. They stated that most women did not know about their preeclamptic condition, as explained here:

*No. The reason could be that while she was just normal and maybe just eating something that it suddenly happens (her BP goes high) and she may not have been visiting the MCH because she's just a woman with little income who is just staying at home and thinks that this is just a headache. – HGH Midwife 08*

There were also certain views among the participants regarding their patients lack of understanding of the dangers associated with the condition despite some of the women having already experienced preeclampsia in a previous pregnancy.

*There are two kinds of patients who may develop preeclampsia. Young ones with first pregnancies who have no idea about this condition, and older women who may have had more than one pregnancy and had already had preeclampsia.*

*The latter group knows what preeclampsia is. However, even this group may not know about the serious effects that it has on the mother and the baby until they experience the condition and receive the treatment afterwards. – HGH Student Doctor 02*

*They often know that they have blood pressure that affects them as a result of their pregnancy, but they do not know the serious consequences that will happen if it is not treated early. – HGH Student Doctor 05*

Another student doctor, goes on to elaborate how the women do not take medication for their ailments despite their recognition of there being something wrong. He goes on to further highlight how the women also lose their pregnancies because of the complications of their condition, he says:

*Most of the time, they come to you when they maybe saw swelling on themselves and experienced a headache. Surprised with what they have, except for one or two who may know already, most of the time unless you mention it to them. They don't know.*

*While I was here, some of them will tell you 'we had an idea about this on ourselves, we had this before in past pregnancies...' but they never went anywhere or took any medicine for it. Some of them will have lost many pregnancies this way. 8 months, 7 months, and they tell you that when the blood pressure increases it is right away and then the child will die. But even then they are not taking any sort of medication. – HGH Doctor 01*

There were also some findings in form of Somali terms which were mentioned by the student doctor 01 as well as other participants in the study who also acknowledged their existence. Being on the critical spectrum of views, the young student doctor asserted that the women were *avoiding* the condition by using the Somali term “*deelayco*<sup>1</sup>”.

*“Among the Somalis most of the time there is this thing where the person will be criticised. I mean, before, I'm not sure about current times if people are scorned for things but the women, the mothers, think that if their daughters have this hypertension it might be passed down and it might affect their marriage... Or they could tell themselves that they will be told, that so and so family has that illness.” – HGH Student Doctor 01*

The issue of the women avoiding or being in denial of the existence of their condition was likewise raised and as the other participants also mentioned it being one of the challenges when dealing with the patients.

*“They refuse to be confronted with the illness – diagnosed with it – and they evade it so she won't have to take medication and all that, they evade it. So they refuse to be told that they have this condition. For example, when you are taking their history, they are refusing, if you ask if she had this before, she*

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<sup>1</sup> Deelayco which when literally translated means criticism or to be criticised for something. This was displayed by the women in regard to their condition of preeclampsia.

*may not tell you. Refusing to be told (by other people) that so and so had this hypertensive condition.” – HGH Student Doctor 01*

- **ENTRY WAYS INTO MANAGEMENT CARE**

When the health workers were asked about their overall experiences with the management of women with preeclampsia, from the moment they entered the hospital, whether on their own as self-referrals or by being referred from another health centre or Mother and Child Health clinic (MCH). Until they were admitted and managed for their condition, many of the participants agreed with the words of the intern doctor, who explained:

*They mainly come to the general hospital in three ways. They are either from MCHs, or from private clinics, or they are brought by their relatives. In terms of numbers, in my opinion, the self-referrals are more than the other two groups. – HGH Intern 05*

Another participant mentioned the referrals from rural side and were brought to the public hospital by means of an ambulance. The midwife mentioned that those referrals that were from the rural areas were in the critical stages of preeclampsia often going into, if not already within, the grip of eclampsia.

*They pass through the MCH and they refer them to the hospital, either the group hospital or the other private ones. So the majority that come here are often in a bad condition and if that woman has completed her set (is full term) then she should be operated on quickly so her condition can improve and management can be continued from there. – HGH M07*

By contrast, it was mentioned that the women who lived in the urban areas are not in a similar critical condition as the women in the rural areas when they do come to the hospital as this nurse describes:

*Very few of them may get sick at home... They may come as self-referrals to the hospital. The self-referrals usually come to the hospital when they experience eclampsia, but those who are referred from MCHs and hospitals come with preeclampsia. – HGH Nurse 07*

- **STRUGGLES OF MANAGEMENT**

Regarding the challenges of management the health workers faced during their work at the ward, they agreed on the existence of a wide variety of issues which hampered the flow of management from how effective they felt it could have been. The reported issues ranged from, a lack of resources, the nonexistence of a uniform management pattern from the attending doctors, poor recording and monitoring of the blood pressure, to the challenges of the patients presented with the concurrent use of alternative or traditional medicine along with the management provided by the hospital. Based on the findings a sense of struggle between the health workers was apparent and this is reported in the narratives below:

*There are many different doctors who work in this ward. Each doctor may have his own guideline. Nevertheless, these personal guidelines must go along with the WHO guidelines. Different doctors, interns, or senior medical students doing clinical training may sometimes give conflicting instructions while following different guidelines. Dosages of drugs, such as magnesium sulphate, should be administered according to one WHO guideline. There are, however, the old guidelines and the new one. Both are sometimes used. But everyone is supposed to follow the new WHO guidelines. Drugs and equipment are also available now. But we still need to do quite a lot of improvement. – HGH N07*

*The major challenge that I personally face at the hospital is close monitoring of the patients. There is no close coordination between the doctors and the nurses. For example, when you are managing a patient with preeclampsia and you have to go out for lunch, the nurse that you instruct to take care of the patient while you are out may not do close monitoring and give the necessary treatments at the right time. As doctors, we are also part of that problem, as we sometimes may not do close monitoring, either. – HGH Intern Doctor 05*

*The things that stand in the way are for example, what happens during holidays you may not find a doctor available easily and you cannot order (prescribe) things for the patient. You do what you can but you still have to wait for the doctor. That is a challenge that exists. Something that might be*

*easy or minor to do but you are afraid because you are waiting for the doctor's order. That and that a guideline exists for all the doctors. – HGH M08*

*The main challenge is monitoring the patient and ensuring that they take their treatment regularly and properly. We must often make sure that the right doses of the drugs are given on time and don't either forget or take the wrong dose. Another challenge is poor recording of the patient's treatment or lack of it sometimes. – HGH SD02*

*We have Dabbler Ultrasound, which we use to check the fetus. It is mobile and it helps us a lot when going about the ward. We also have urine dip stick, and that is very useful, too. There is also BP in the ward and we also have our BPs. We have no CTG, which is useful to check preeclampsia. We are not yet at world standards, but we have the basic equipment in the hospital. – HGH 01*

Another challenge which was raised regarding management was how alternative medicine was used alternatingly with the management provided at the hospital. The term “djinn<sup>2</sup>” was raised in this regard as being considered the source of the illness by the patients and their relatives. Another Somali term was also “Ilaj<sup>3</sup>” which when translated literally means healing, in this context it refers to traditional medicine and healers. The health workers agreed on it presenting as a challenge of management as described by this student doctor and nurse who said:

*Yes, I remember a case which I came across, a woman pregnant with twins and her BP was very high. She also lost previous pregnancies because of this and she believed as did her husband who informed me that she is possessed with Djinn those called (quroomaha) and they come down on her and then he said he wanted to take her out of the ward and take her to a sheikh so she could have the Quran read on her but her condition was very severe. – HGH SD 01*

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<sup>2</sup> Djinn or jinn is an Arabic word referring to a supernatural being in Islamic texts and the Quran. They are frequently mentioned as being from another universe and are beings created from fire which can possess human beings.

<sup>3</sup> Ilaj is the Somali term used for traditional medicine and when literally translated from its Arabic root means, to heal

*We have serious challenges from patients who use alternative methods, such as llaj. If, for example, a patient experiences seizure while suffering from eclampsia, the patient and her relatives may believe that she is possessed by djinn and take her to llaj instead of bringing her to the hospital. And this usually leads to fatal consequences. – HGH 07*

- **SENSE OF CREDIBILITY AND COMMITMENT IN THE WORK PLACE**

The need for respect was pointed out by the participants as being a concern when they were asked about the challenges they faced in their daily work environment. The issue of shortage of staff and an administrative imbalance within the shifts were also expressed. As the following narratives further elaborate:

*To be able to work well with one another and to find that harmony is important. Like, for example, between the workers themselves. That they respect one another and to be after one another according to how we work. Even though we (nurses) follow whatever the doctors order us and do not hang an infusion (IV bag) without their order. — HGH Midwife 08*

*There are many challenges. Some do come from the hospital management. The hospital management is very much understaffed and this brings about big gaps in providing efficient services and administrative coordination. For example, I am a nurse responsible for looking after the patients in the ward, and yet, I have to literally run around in order to get basic medical supplies, such as, drugs, sanitary supplies, and blood from the blood bank. Most of the administrative work is done in the morning and I may not get these supplies in the afternoon or evening if I do not obtain them in the morning. There are clear differences between the morning shifts and the afternoon/evening shifts.*

*Since most of the administrative work is done in the morning, the morning shift can get supplies and administrative assistance easily. But the wards are usually crowded with medical staff and with visiting relatives. The afternoon/evening shift, on the other hand, may experience difficulties in getting supplies and administrative assistance, but the wards are not crowded*



*and patients can enjoy peace and quiet and can easily be managed.* – **HGH Midwife 07**

- **THE WAY FORWARD**

The participants suggested improvements of the management of preeclampsia within the hospital. The needs they expressed ranged from more training programs for the staff, assistance of the poor patients, and the control of patient relatives. Recommendations for awareness of the preeclampsia through media, particularly by means of television and radio programs were also mentioned by many.

*Training is a constant need since the medical knowledge is constantly changing. So there should be periodic and regular training for the medical staff. Apart from the medical education that health workers receive, there is no regular or periodic training at the hospital. As a result, our medical knowledge and skills may remain stagnant. In terms of technical support, we need more equipment, such as the scale to weigh the patient and CTG (cardiotocography).* – **HGH Intern Doctor 05**

*The most important need is assisting poor patients with the acquisition of drugs and other medical services. Often, poor patients come to us with no money at all, and if they have to get the care that they need, they are asked to pay a lot of money. The irony is, the hospital stores or the stores of the wards may have drugs and other supplies that may expire when poor patients go without them at the threat of their health. I would suggest that this inconsistency has to be addressed and poor patients should be given free medical charge.* – **HGH N07**

*For the ward? The ward needs... (laughs) you can see for yourself, it needs to be fixed. To make a system for the ward. To make it presentable and have embellishments for it and have it different than the other wards by controlling the crowds and noise by the relatives for example. To make a waiting place for the patient's relatives and a security guard that guides them would be nice.* – **HGH M08**

*In my opinion, there are many improvements that can be made. However, I consider the most urgent one to be an awareness campaign about preeclampsia that can be given. Another awareness can be directed to the relatives of the patients with the disease. This campaign should aim to convince the relatives to leave the patient in the care of the doctor whom they should not disturb or undermine as sometimes happens. Prevention is better than cure. And as a result, pregnant women should be encouraged to go to hospitals, clinics, and MCHs as soon as they conceive through intensive health awareness campaigns conducted through the media, particularly the TV. –HGH SD02*

#### 4.2.2. THE PRIVATE HOSPITAL

- **WE KNOW BUT THEY DON'T**

At the Edna hospital the participants also expressed similar knowledge and understanding of the condition by providing the textbook definition of the condition. As well as conveying the dangers the condition and knowledge of how to manage preeclampsia. The perception of them, the health workers, knowing and the patients not knowing was also observed. These findings are further shown in the following narratives:

*No they have no idea. The only thing is that she came from her house and she told herself to go check herself, to go see what's happening with her at the hospital. Afterwards to find out she has high BP and let me check her and tell her she has hypertension, some of them will expect to be admitted into the hospital and that we give them medication and others will say 'I want to go back home.'* – **Edna Midwife 06**

*Most of them don't know about it. They're few (the ones who know). But they can tell you 'I once had blood pressure, I was told I had it.' But they can't know what it is exactly.* – **Edna M08**

*There are some who do, when they come to the hospital and she is given health counselling and she is told to check her blood pressure every time and to come in contact with the hospital... When she feels she has a headache for example... And she is prescribed medicine... The mothers who come. And there are many mothers who don't come.* – **Edna M07**

Similarly, the participants reported that the patients avoided treatment or were denying the existence of their condition this occurrence was also observed in the public hospital and is raised by the midwife as illustrated here:

*Even though she had the medication the people... like I said before the mothers don't have much knowledge so she would be unwilling to accept that she's not well and if she wants even though she may have a fear about this condition is threatening her life, she may say to herself that this medication could harm the baby.* – **Edna Midwife 05**

- **ENTRY WAYS INTO MANAGEMENT CARE**

The participants also revealed that the patients entered the hospital either on their own as self-referrals, by being referred from another health centre or Mother and Child Health clinic (MCH) as was the case at Hargeisa Group Hospital and stated in the following narratives:

*There are some that are transferred. From the MCHs, for example, or from the rural side. And there are others still that come to the hospital for health reasons. When having their check-up they are found out (to have preeclampsia) in the antenatal care for example (Edna has an outpatient antenatal care unit within the outpatient department) where the BP is checked or odema is noticed. Some who developed fits are brought here (to the ward). There exist those who aren't even aware of what happened to them or what they have. – **Edna Midwife 08***

*There are those that are referred but those are rare. But most of them come walking on their own. There are those that are referred from the MCH but most of the time those that are from the MCH are those that went there while they were in Labour, and then they were transferred for another condition but not pre-eclampsia because the MCHs can manage it. They have what they need to manage it, they know how to and have the medicines. – **Edna Midwife 06***

- **STRUGGLES OF MANAGEMENT**

When compared to Hargeisa Group Hospital there was a sense of uncertainty regarding the mention and use of the new WHO guideline for preeclampsia which was released in the latter half of 2014, when the participants of Edna hospital were asked about it, as is illustrated by this midwife who said:

*I have no idea about that one. I don't know when they issued that one. Back in... back in February, march, April... magnesium sulphate was used, that other one that was updated... I don't think it was changed. The old one is still used, although this hospital has news of the guideline being changed it may*

*have been in the last few months. September, October, or November, even this month. Although I haven't seen a case of eclampsia in those past months. So it might be that it has changed then.* – **Edna Midwife 01**

Aside from the guidelines being a challenge, the participants also revealed the existence of other challenges directly related to patient care and referred to *Ilaj*<sup>4</sup> as being a challenge. As shown in the following narrative:

*Most of the time I don't have any challenges, but sometimes I face the patient who is not understanding what I am doing for them... Or what I'm giving them is doing something for them, for the benefit... That is the most, patient related. But other challenges are non-existent. Or when they will say (the patient or her attendants) that I am a young girl, aged and my experience is not the same... (laughs) So they would say, 'these young children are working for us, you're a young girl... You don't know much about these things...' – Edna Midwife 06*

*There were no challenges. With the patients, firstly, you can encounter some who are unwilling to cooperate and refuse you (unwilling to cooperate) but there is no other challenge that I can think of. For example you will see a woman who's a normal delivery who has stayed in the hospital for 24 hours and monitoring was done for her to check for bleeding... and what not and she could tell you 'I left children', 'my house is lonely' (left her house and especially children on its own) – Edna Midwife 08*

*I came across cases that were preeclamptic and eclamptic which I carried out the management for. Most of the time though the person is accepting the challenge comes from the relatives. And in our Somali culture it appears that if the patient is ill the relatives take over the patient's power (of decision). Therefore, personally speaking I have not encountered it from the patient but I have come across it from the patient's relatives who encourage other means and say 'we're going to Ilaj' and 'this isn't working..' 'she would have recovered so much earlier if she left sooner'. And since we know that the medication will*

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<sup>4</sup> *Ilaj* is the Somali term used for traditional medicine and when literally translated from its Arabic root means, to heal.

*not give a response instantly but takes a step by step process.– Edna Midwife 05*

- **SENSE OF CREDIBILITY AND COMMITMENT IN THE WORK PLACE**

When compared with the dynamics and challenges which existed at Hargeisa Group Hospital regarding the work environment, the participants at Edna Hospital expressed a sense of peace and harmony. They conveyed the non-existence of challenges other than and a need for training as expressed in the following narratives:

*Even waalahi (swear to God), our doctors work with us... When we call them, 'this thing is like this and that and that' they come to us immediately. Even if we don't call them, and our patient is stable when they know that the patient is sick... Without us having to call them, they come and ask, "Tell me about the patient so and so, how is she doing? Has anything changed? How is the Labour progressing?" – Edna Midwife 07*

*I don't see that there is that much of a need for anything. Except for more seminars to be made though. That would be very good for training. – Edna Midwife 08*

*As health workers? The needs include the things that they need to work with for example. The person first of all is always improving and will not be staying at the same stage and every time will be updating... Extra knowledge more than what the person has learned before, that the person finds that. – Edna Midwife 05*

This midwife further suggested that health workers should be able to provide the necessary treatment when the patients do not have the means to procure the medication for their condition in time, she describes this as being a need the hospital has by saying:

*There are times in the hospital for example the pharmacy that is in the hospital premises and when the person comes to you... the condition that she is in is critical because her BP is high and you are afraid she can be eclamptic*

*and what happens is her people will be late in bringing the medication... it could be that it is not in that person's power to. So that is where the care can be lost. I would say that the health workers be available in caring for their patients. – Edna M05*

- **THE WAY FORWARD**

With regard to improving the management of preeclampsia, the participants voiced the following suggestions:

*The care should be provided completely for the person. There should be a proper place... what will happen is a mother with preeclampsia may not have the power to go into (be admitted into) a private room and the expenses are too much for her therefore it would be effective if that mother could receive that right environment for free where her BP could be decreased properly. For the poor patients for example, there should be a free service that isn't binding and is available for emergencies. Even though the emergency kits are available it would be good if they were free so the person would be encouraged to ask for them. These are the things that would improve management. – Edna Midwife 01*

*What I would give what happens is that every hospital... well Somaliland is wide... and health care is not in covering every place... But then again there is a saying that goes, 'one limps to the side of one injures' and the MoH should try to... now what happens every hospital even though they follow the WHO guidelines then again you cannot say that some of the facilities are using the guidelines the way they should and that arises from the people who should have the knowledge... That in the place of a midwife, a nurse is working. The procedures and systems that are required cannot be followed. Then the ministry of health should make a guideline that comes from the ministry itself. – Edna Midwife 05*

*I would tell the MoH which is in-charge of health, first all about the health centres. That they go and see them and check the management that each one provides and how it is. All the MCHs, and the privates that they have contact with them and see what is missing from them and what they have and don't have, drugs for example. Because some in MCHs you might not even find some of the medicines if you were supposed carry out management. And so they should regularly check all the health centres. For those places that have no health centre, to make one there. -- **Edna Midwife 08***

The participants of Edna Hospital provided similar suggestions to those of Hargeisa Group Hospital when asked about how to raise the awareness of preeclampsia and suggested the following routes: by using the media specifically by means of the television, and in utilisation the MCH centres to educate the mothers and health counselling. Once taught about preeclampsia the mothers are the ones to spread knowledge and teach one another. These are further highlighted in the following narratives:

*I would recommend of them is that they make programmes that talk about health especially for pregnant mothers that inform them, or in the TV stations and radio stations, telling them... That the MOH makes special programs for the pregnant mother and talks about things that are related to women's health in them. That they make more health programmes. And to make more health counselling programmes. – **Edna Midwife 07***

*To teach every mother, to tell her when she should be in contact with the MCH. From the time she becomes pregnant until she delivers. That way would be good. To teach every one that goes to the MCH about it and to tell that person to coach others in their neighbourhood or the neighbours or any other place they came from and to spread the message and explain what they have learned. – **Edna Midwife 8***



### 4.3. SUMMARY OF FINDINGS

In the following section a summary of the findings made throughout the duration of the study at both the study sites will be presented in table form for ease of reading and comparison sake. It should be noted that the order in which the findings are presented in this table are in no way particular sequence or arrangement.

HGH - THE PUBLIC HOSPITAL	EDNA HOSPITAL - THE PRIVATE HOSPITAL
<p>Despite all the health workers who were interviewed being well aware of the definition of preeclampsia and thoroughly explaining the steps to follow in the management of a patient.</p> <p>The challenge of acquiring the necessary supplies to perform adequate management was a cause of stress specifically during the evening and night shifts.</p>	<p>There was a clear system in place that was functioning in an orderly manner which was unlike the disorganised impression that was observed at the public hospital.</p> <p>The presence of a distinction of roles and an organised form of management delivery was also noted.</p>
<p>There was also mention of difficulties in acquiring medicines. Particularly the antidote of magnesium sulphate, calcium gluconate which was not available in the emergency kit, during the desired time frame.</p> <p>This was due to the existence of extra-long queues at the pharmacy within the hospital or when it was closed.</p>	<p>The emergency kits were restocked and the other supplies needed for management were also given out by a supplies administer on a more regular basis.</p> <p>Calcium gluconate was not a part of the emergency kits.</p>
<p>There were hidden power struggles between the nursing staff and the doctors and an unclear demarcation of the duties was not present at times specifically during the management of a newly admitted patient.</p>	<p>The ward had two doctors who were in charge of and carried out the morning rounds alternatively and were on call should an emergency arise. Otherwise the midwives had control of the wards in their absence.</p>
<p>With two nurses or midwives to every shift and no aid from the student midwives and nurses who only came for practical hands-on learning during the morning shift, the</p>	<p>The three nursing shifts that were in charge of caring for the ward also had the added advantage student midwives assisting them specifically in the morning shift.</p>

<p>remaining two shifts were understaffed, overworked and lacked the resources – including the presence of the doctors who were predominantly available during the morning shift -- necessary to carry out prompt management.</p>	<p>This aided the efficiency of the workload and overall management of patients as it had in the public hospital.</p>
<p>Checking and monitoring of the blood pressure (BP) of the patient was often carried out by the student nurses or midwives who attended the ward during the morning. They did so by first utilising one BP machine and then cross-checking it with another from their colleagues.</p> <p>However this was not something that was done often and it is unclear if it was carried out due to their new training or recommended in the guidelines they follow.</p>	<p>Checking and monitoring the BP of the patient was carried by the student midwives.</p> <p>The also cross checked with two BP machines although this was also not executed routinely</p>
<p>There was inconsistency in the managements patterns of the doctors and this caused confusion for the midwives who suggested that a uniform plan be followed by all doctors appointed to the ward. There was also a suggestion of having a uniform guideline of management.</p>	<p>Consistency was seen in the management plans however there was the challenge of the patients being unable to provide the medication expected of them at the particular times and this raised a delay which was mentioned by the participants. There was a suggestion for the provision of free funding of such patients.</p>
<p>Guidelines of management of other cases were seen in the ward. However no guidelines related to preeclampsia were seen and the latest WHO guideline that was mentioned was not within reach or on display anywhere in the ward.</p>	<p>Guidelines of management and information sheets were placed at different areas of the ward and hospital. However, no guidelines regarding preeclampsia were seen anywhere in the ward.</p>
<p>There was also discrepancies and poor documentation of patients within the monthly record book. This often led to patients ‘falling through the cracks’ and not being recorded due to the workload of the midwife-in-charge who was also responsible for the record book.</p>	<p>There was no record book at the ward however the system in place designated the finance officer the duty of recording every patient and later forwarding the data to the hospital administer.</p>

<p>There was also poor documentation in the patient files with the student doctors at times not recording details of the management they had carried out for the next shift who was often uncertain whether a certain drug had been administered or not. This challenge had been addressed by the interns who had been newly to the wards in late November.</p>	<p>Documentation was written routinely and after every round ended, the midwives carried out the instructions that the doctor had left in the patient files.</p>
<p>This hospital placed emphasis on teaching student doctors. Classes were conducted by the head doctor of the ward at varying times within the ward.</p>	<p>This hospital predominately placed emphasis on teaching midwives and classes were held during the day at differing times within the hospital wards by one of the visiting foreign doctors.</p>

## **Chapter Five**

### **5.0. DISCUSSION**

Effective interpersonal and intra-professional communication is fundamental to producing positive health outcomes such as better patient compliance and improving health-care education and administered treatments. However, it is potentially one of the most important challenges health workers confront in their daily work at the hospital, encompassing communications with patients and other health workers. The reason for this is effective interpersonal communication is not easily acquired, cannot account for different perceptions and expectations about the health encounter, and is subject to constraints health workers are under e.g. heavy patient loads.

These interpersonal and intra-professional interactions accentuated the central differences of patient management by the health workers at the public and the private hospital observed during the course of this study. What were these differences and why were they so prominent? The answer would be supplied in a variety of factors, which contribute not only to differences of organisation in public and private hospitals, but to how both sectors more generally care for their patients, and specifically manage those with preclampsia. The discussion will highlight these factors in terms of how they influence the receiver of the health-care management and the provider of that management: the preeclampsia patient and the health worker, respectively.

In the following section, the findings produced from the study will be discussed using the health-care systems framework. The researcher aims to tackle some of the key findings obtained through the interviews by utilising this theory to focus on the management given to patient of preeclampsia seeking good health-care. The existing differences and similarities of the management of preclampsia at the private and public hospitals will be examined in addition to the barriers preventing its effective delivery.

## 5.1. THE HEALTH CARE SYSTEM

Three elements are required for the health care system to effectively manage the illness of patients. These are the provision of highly trained and well-paid staff, the effective communication of information on which sound decisions are to be formed, and the availability of efficient operational facilities to deliver the medication and equipment necessary for patient management.

Certain parts of the private sector in Somaliland employ these elements to some degree. Edna Hospital is an illustration of this; it provides its well-trained staff with reasonable pay, imparts relevant health care information to its patients before they leave the hospital and is adequately equipped with the technology\_necessary to deliver good health care. Hargeisa Group Hospital, however, demonstrates the difficulties hospitals in the public sector face (Prince et al, 2014). Their conditions are starkly different from those of hospitals in the private sector; a result of a lack of funding, a mismanagement of resources and pervasive conflict between the doctors and the nurses. The staff at Hargeisa Group Hospital are overworked and underpaid, and the hospital lacks both the human and technological resources to operate effectively.

To take a prime example, the ambiguous work roles of the HGH health workers frequently led to conflicts between nurses and doctors at the Gyno 1 ward. Doctors failed to properly document health care instructions for the nurses with different doctors documenting conflicting instructions at different times. Moreover, the ward's lack of organisation led to several doctors administering their own management on the same patient, which confused the nurses. The work of the health-care workers in successfully managing their preclampsia patients, and other patients more generally, is impeded as a result. However, in the maternity ward at Edna Hospital, the clearly assigned roles of nurses and doctors ensured the provision of a better standard of patient management since the doctors wrote precise instructions for every patient in the files for the midwives to execute.

These issues serve to underscore the lower overall satisfaction levels (with their work environment) registered from the HGH participants with the work they perform when compared to their counterparts at Edna Hospital. During the data collection, it consistently emerged that the health workers at HGH were frustrated, dissatisfied

and let down by the response to resolving the problems within their work environment. Conversely, participants at Edna hospital did not express frustration or being let down as forcefully.

The rest of this discussion will examine the hurdles that were described by the health workers and explore them using the three elements defined earlier to be integral in the competent delivery and management of healthcare services. First, in order to better understand the circumstances of healthcare, it is worth addressing the systems which have emerged to become the salient factors of this study. These are the patient and the society; the professional healthcare system; and the traditional medical sector. As Kleinman (1978) explains in his comparison of medical systems as cultural systems: “a theoretical model of medicine as a cultural system, if it is to be useful, should *specify what that system is and how it functions*. It should provide a *method for describing individual systems and for making cross-cultural comparisons* between different medical systems. It also should produce a more systematic analysis of the impact of culture on sickness and healing than is possible without such a framework” (p.85).

This theory reveals how scrupulously interlinked the dynamics between health care providers and their patients are. There cannot be a richer understanding of the management of health within a country without accounting for the effects cultural norms and social systems contribute towards health care provision since that would produce limited general perspectives. The utilisation of Kleinman's concept of medical systems as cultural systems allows for a closer observation of the factors comprising the whole system, thereby giving prominence to the nuances in the existing dynamics of preeclampsia management in the hospitals studied.

The following section will discuss how the factors cited by the study participants affected their management of patients with preeclampsia at both hospitals.

- **The Societal factor**

The Somali society in Somaliland is deeply family-oriented, placing incredible value on honour and loyalty within the larger extended family and the wider tribal context. It is highly common for families (comprising the husband and wife, their children and their extended relatives) to live with one another. It is within these extended family

structures that decisions regarding health seeking are made and governed, as was noted by the references the study participants made to the influence of relatives' opinions on patients' decisions.

This was found to complicate the management of preeclampsia patients since the relatives of patients exercised their familial power when the patients were unable to make prompt decisions, and thus assumed the patients' agency to decide on the course of their health treatments with the health workers. As a result, tensions between the relatives and the hospital's staff were a constant since the former sought to override the health workers' instructions and disregard prescribed treatments, creating a shaken sense of authority within the doctors and nurses. This led to regular delays in health care provision, which contributed to the inefficient management of the preeclampsia patients at both the private and public hospital.

While this study excluded the perspectives of preeclampsia patients and their families to focus on the comparative experience of the health workers at a private and public sector hospital, it does acknowledge that the impact of this cultural issue on general health care provision needs to be explored.

- **The Professional Factor**

Numerous disparities exist between the public and private sector hospitals in this study. The most prominent issues to emerge were the distinctions in infrastructure (physical and managerial) and the economic handling of the resources used in each sector (manpower, monetary funds or equipment and medicine), which were needed to sustain daily work and patient management.

There was a distinct difference between the handling of resources at the private and the public hospitals. It was evident that the distribution of resources were mismatched, a result of differences in the policies and actions at the administrative management levels at both hospitals. Another distinction was the previously mentioned interpersonal and inter-professional dynamics that existed between health workers, the doctors and the nursing staff, at both work environments. The unclear boundaries identified within the roles of the doctors (including student doctors), interns, midwives and the nursing staff at Hargeisa Group Hospital led to the consistent inefficient handling of health treatments. Furthermore, produced

interpersonal conflicts since parties engaged in a 'blame game' when mismanagement of preeclampsia patients occurred. Edna Hospital did not have this issue since the midwives usually assumed charge of order in the maternity ward. The exception to this was when two doctors, appointed to the ward, completed their morning rounds and left clear instructions in the patient files for the midwives and student midwives to execute. It was the distinction in roles which permitted the delivery of effective preeclampsia patient management since it left no room for the uncertainty and conflicts pervasive at Hargeisa Group Hospital.

These findings constitute the key difference in the management of preeclampsia patients in the public and private hospitals. This study approached the professional health system as a cultural system, with the intention of examining health workers' perceptions on how their professional interactions with the preeclampsia patients, the patients' families and each other impacted the health care provision for preeclampsia patients; thereby, providing a more nuanced picture of the subject.

- **The Traditional Medicine Factor**

The existence and predominant uses of traditional medicine was mentioned by participants from both hospitals to be a key challenge in the management of preeclampsia. Many of them cited the ignorance of patients and the wider society of common health issues as the cause for this, and more specifically stated that knowledge of preeclampsia and its severity when left undiagnosed or unmanaged was absent from mothers.

The health workers mentioned how traditional medicine practices were likely to cause more harm than good, particularly with regards to the djinn, which patients often blamed their preeclampsia condition on. They stated that patients, and their families, often engaged sheikhs to perform exorcisms on these djinn. The loud voices used to recite verses from the Qur'an in the exorcisms would then adversely affect the preeclampsia patient, and result in their entering eclampsia. For this reason, many of the participants did not appreciate the discharges of preeclampsia patients receiving on-going health treatments, and instead asked the sheikhs to recite Qur'anic verses within the controlled hospital environment where they could monitor their patients.



The researcher acknowledges that this study's focus on the health workers excluded the perspectives of traditional healers. It should be noted that traditional medicine forms a principal aspect of Somali culture and deserves investigation in order to understand its contributions to health seeking behaviours in Somaliland.

## **5.2. TWO WORLDS, ONE DOMAIN**

According to the perceptions of the health workers interviewed at both of the study sites, women with preeclampsia only seek help from health care centres, whether they are MCHs or hospitals, when they feel there is a need for them to do so. Moreover, the health workers mentioned that it is more common for these women to arrive at the tertiary hospital on their own (self-referrals) rather than be referred from either the MCH or other private primary health clinics. This was true for women from both urban and rural regions of the country, however, it was stressed that women in rural areas had the disadvantage of not being able to access the MCHs as often as their urban counterparts were able to.

Participants additionally mentioned that the women were often unaware of their preeclampsia condition prior to their admittance to the hospitals. This was especially the case for primigravidas or first-time mothers to be. However, the health workers were quick to point out that where women were aware of their preeclampsia, it may have been a result of their having previously experienced the condition. With regards to the health workers' knowledge of preeclampsia, it was evident that all the interviewed participants could competently provide the 'textbook' definition of preeclampsia when asked, with some offering more detail and accuracy than others. Knowledge of preeclampsia and its treatment was therefore not a salient issue.

Applying effective patient management was, however. As previously stated, the existing administrative difficulties at Hargeisa Group Hospital, concerning the provision and allocation of necessary resources, negatively impacted how health workers delivered preeclampsia patient management. This was compounded by other issues such as a shortage of staff at the maternity ward; the significant number of patients waiting for their families to pay for lab services or medicine that would help the diagnostic and management processes; and a grossly disproportionate burden of patients to nursing staff during each shift, particularly the evening shifts which were disadvantaged by the absence of student nurses and midwives. In such

stressful situations, the shortage of staff leads to harsh repercussions for the health workers, and weighs heavily not only on them, but on their families who also have to bear the burden of care (Prince et al, 2014).

It was common for the student doctors to be the only doctors present on the maternity ward. Consequently, they were pressured with having to use their own judgement to make decisions on how to proceed with managing preeclampsia in patients until a senior doctor could be reached. The midwives were expected to follow the instructions of the student doctors, regardless of whether they had any objections to the treatments prescribed based on their longstanding experience at the maternity ward. The resulting conflict was apparent in the interviews of the participants.

In contrast, the health workers at Edna Hospital experienced these burdens to a small degree. The researcher observed that they did not have as many patients on the maternity ward, they had better managerial structures in place, access to technological resources, clearly defined health worker roles and on-call doctors within the hospital's premises. This led to a more efficient management of preeclampsia in their patients when compared with Hargeisa Group Hospital.

### **5.3. THE WAY FORWARD**

From the views presented by the health workers in this study, it was noted that knowledge of preeclampsia, and the complication of eclampsia which it leads to, was limited at the patient and community level. This is indicative of an overwhelming lack of awareness about preeclampsia, which may be caused by ineffective interpersonal communication on the part of the health workers who are obligated to share relevant health care information with the patient. A lack of awareness may also contribute to delays in health seeking by patients, which can then lead to the management of preeclampsia becoming ineffective due to the late presentations (Osungbade, 2011).

The participants of this study provided various suggestions to raise the awareness of preeclampsia among patients and the wider populace, as was presented in the Findings section. These recommendations will assist in bridging the communication gap, which exists between health workers and patients, leading to effective health care provision. They may additionally decrease the frustration felt by the health

workers managing preeclampsia patients in this study and aid in increasing the overall job satisfaction of both parties.

The physical and managerial work environment issues which produced feelings of anger, disappointment and frustration in the health workers with regards to their work at Hargeisa Group Hospital needs to be addressed in order to improve future preeclampsia patient management. Student doctors were unhappy with how the nursing staff functioned and the nurses felt their efforts were not appreciated by the doctors. This gap or conflict in communication occurs when the interests that one party identifies are opposed by another party, and it is within this perception that conflict arises (Patton, 2014). This conflict was a prominent issue on the HGH maternity ward. It could be resolved by addressing the grievances of both parties, clearly defining the duties of their roles and setting strict parameters regarding their shared tasks. This should potentially result in a more cohesive effort towards the management of their preeclampsia patients and a more satisfactory work environment.

Finally, participants from the public sector hospital expressed frustration about how the lack of resources impedes their provision of good health care to preeclampsia patients. Some also communicated frustration at their governing bodies urging them to do better which was also demonstrated in Prince's study (Prince et al. 2014). The gravity of this issue could be addressed in a formal presentation of the health workers' concerns to administrative personnel and the Ministry of Health. The researcher intends to present the recommendations made by the health workers at both the public and private hospital to Somaliland's Ministry of Health with the aims of raising the importance of improving the management of preeclampsia in patients at all hospitals.

## CHAPTER SIX

### 6.0. CONCLUSION

#### 6.1. Recommendations for further studies

As for further research focuses, it is highly recommend that more studies examining the patient's perspective would be of great benefit in understanding the reasons behind the patient health seeking behaviours and the factors which shape those decisions. Further studies also addressing the rural side and the management of patients that exists there would also be recommended since this study primarily focused on urban management. In particular management at the hospital level. It is encouraged that studies focusing on the primary level of care or at the MCH level be conducted to understand and gain a grasp on the management carried out at that level.

Suggestions for further studies are thus presented in the form of research questions and include the following questions:

- *How do pregnant women perceive preeclampsia?*
- *How does the society affect a preeclamptic woman's decision in seeking healthcare?*
- *What are the steps which improve the delivery of management to woman in rural areas?*
- *What are the challenges related to healthcare pregnant women with preeclampsia in rural areas face when compared to their urban counterparts?*
- *How can the management of women with preeclampsia be improved overall in Somaliland?*
- *What are the numbers and figures of women with hypertensive disorders of pregnancy in Somaliland?*

Additional studies conducted in these areas would aid in shedding more light upon a condition that affects countless woman of child bearing. For this reason, as researchers, it is our duty to address issues affecting the world we live in and to expand upon our search in the topics we choose.

## **6.2. Concluding remarks**

In order to manage a condition in the most effective manner, health workers are required to have thorough knowledge of the condition which is to be managed. Similarly, to recognise the signs of this condition, the patients are favoured to have knowledge of their condition so they may seek health care without delay.

That said, the management of preeclampsia is realised by the knowledge gained through the extensive years of professional training. As well as by application the knowledge developed through years of practical experience. In the private and public sectors, despite their differences and the challenges they faced, both sectors followed the same World Health Organisation guidelines of preeclampsia management when they provided to the health care needs of their patients.

This thesis explored the points which have been revealed thus far in the form of a variety of factors that have influenced the management of patients with preeclampsia in the public and private sides of the health care system. The study has shown that when comparing the public with the private hospital, the health workers expressed that the lack of knowledge the patients displayed about their preeclamptic condition, complicated the management process.

However, it is important to note that the problem of the management faced by the health workers can be also complicated by the unknown aetiology of preeclampsia and its unpredictable nature. Furthermore, the challenges identified within this study call for further research and a thorough focus as well as a revision of the health care policies pertaining to the management of preeclampsia in Somaliland.

In conclusion, it is necessary for patients of preeclampsia to know more about their condition and its danger signs. This will not only benefit in the early detection of the condition, but will also improve the management of the patients with this condition. Raising the awareness of preeclampsia among pregnant women is important in saving their lives. This can be achieved by supporting the health workers in this cause since they can be both educators and providers of health. As well as encouraging the Ministry of Health in establishing the promotion of awareness campaigns.

And finally, a notable quote comes to mind which can be applied to everything we carry out in our lives. It advises to do our best and to continue evolving, with the everchanging world around us.

*‘Do your best until you know better. Then when you know better, do better.’*

- Maya Angelou

## REFERENCES

- Abalos, E., Cuesta, C., Grosso, A. L., Chou, D., & Say, L. (2013). Global and regional estimates of preeclampsia and eclampsia: a systematic review. *European Journal of Obstetrics & Gynecology and Reproductive Biology*, 170(1), 1-7.
- Anfara Jr, V. A., & Mertz, N. T. (2014). *Theoretical frameworks in qualitative research*: Sage Publications.
- Aoki, S., Toma, R., Kurasawa, K., Okuda, M., Takahashi, T., & Hirahara, F. (2014). Expectant management of severe preeclampsia with severe fetal growth restriction in the second trimester. *Pregnancy Hypertension: An International Journal of Women's Cardiovascular Health*, 4(1), 81-86. doi: <http://dx.doi.org/10.1016/j.preghy.2013.11.006>
- Association, W. M. (2000). Declaration of Helsinki, ethical principles for medical research involving human subjects. 52<sup>nd</sup> WMA General Assembly, *Edinburgh, Scotland*.
- Barlow, J. H., Hainsworth, J., & Thornton, S. (2008). Women's experiences of hospitalisation with hypertension during pregnancy: feeling a fraud. *Journal of Reproductive and Infant Psychology*, 26(3), 157-167.
- Barua, A., Mundle, S., Bracken, H., Easterling, T., & Winikoff, B. (2011). Facility and personnel factors influencing magnesium sulfate use for eclampsia and pre-eclampsia in 3 Indian hospitals. *International Journal of Gynecology & Obstetrics*, 115(3), 231-234. doi: <http://dx.doi.org/10.1016/j.ijgo.2011.07.016>
- Basu, S., Andrews, J., Kishore, S., Panjabi, R., & Stuckler, D. (2012). Comparative performance of private and public healthcare systems in low-and middle-income countries: a systematic review. *PLoS medicine*, 9(6), e1001244.
- Bate, P. (2000). Changing the Culture of a Hospital: From Hierarchy to NetworkedCommunity. *Public Administration*, 78(3), 485-512.
- Bentley, C. (1989). Primary health care in northwestern Somalia: a case study. *Social Science & Medicine*, 28(10), 1019-1030.
- Bernard, H. R. (2011). *Research methods in anthropology: Qualitative and quantitative approaches*: Rowman Altamira.
- Bhutta, Z. A., Darmstadt, G. L., Hasan, B. S., & Haws, R. A. (2005). Community-based interventions for improving perinatal and neonatal health outcomes in

- developing countries: a review of the evidence. *Pediatrics*, 115(Supplement 2), 519-617.
- Bigdeli, M., Zafar, S., Assad, H., & Ghaffar, A. (2013). Health system barriers to access and use of magnesium sulfate for women with severe pre-eclampsia and eclampsia in Pakistan: evidence for policy and practice. *PloS one*, 8(3), e59158.
- Cabana, M. D., Rand, C. S., Powe, N. R., Wu, A. W., Wilson, M. H., Abboud, P.-A. C., & Rubin, H. R. (1999). Why don't physicians follow clinical practice guidelines?: A framework for improvement. *Jama*, 282(15), 1458-1465.
- Caspar, R., Peytcheva, E., & Cibelli, K. XI. Pretesting.
- Collumbien, M., Busza, J., Cleland, J., & Campbell, O. (2012). Social science methods for research on sexual and reproductive health. *Geneva: WHO*.
- Cowing, M., Davino-Ramaya, C. M., Ramaya, K., & Szmerekovsky, J. (2009). Health care delivery performance: service, outcomes, and resource stewardship. *The Permanente Journal*, 13(4), 72.
- Cunningham, F. G., Roberts, J. M., & Taylor, R. N. (2015). Chapter 2 - The Clinical Spectrum of Preeclampsia. In R. N. T. M. R. G. C. D. Lindheimer (Ed.), *Chesley's Hypertensive Disorders in Pregnancy (Fourth Edition)* (pp. 25-36). San Diego: Academic Press.
- Donabedian, A. (1966). Evaluating the quality of medical care. *The Milbank memorial fund quarterly*, 166-206.
- Duckitt, K., & Harrington, D. (2005). Risk factors for pre-eclampsia at antenatal booking: systematic review of controlled studies. *Bmj*, 330(7491), 565.
- Easterling, T. R. W11.1 The management of preeclampsia in low-resource settings. *Pregnancy Hypertension: An International Journal of Women's Cardiovascular Health*, 1, S35. doi: 10.1016/S2210-7789(10)60144-4
- Felton, J. (1998). Burnout as a clinical entity—its importance in health care workers. *Occupational medicine*, 48(4), 237-250.
- Foucault, M. (1982). The subject and power. *Critical inquiry*, 777-795.
- Gaym, A., Bailey, P., Pearson, L., Admasu, K., Gebrehiwot, Y., & Team, E. N. E. A. (2011). Disease burden due to pre-eclampsia/eclampsia and the Ethiopian health system's response. *International Journal of Gynecology & Obstetrics*, 115(1), 112-116.
- Gillon, T. E., Pels, A., von Dadelszen, P., MacDonell, K., & Magee, L. A. (2014).



- Hypertensive Disorders of Pregnancy: A Systematic Review of International Clinical Practice Guidelines. *PloS one*, 9(12), e113715.
- Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. *Handbook of qualitative research*, 2(163-194).
- Guion, L. A., Diehl, D. C., & McDonald, D. (2011). Triangulation: Establishing the validity of qualitative studies.
- Haelterman, E., Qvist, R., Barlow, P., & Alexander, S. (2003). Social deprivation and poor access to care as risk factors for severe pre-eclampsia. *European Journal of Obstetrics & Gynecology and Reproductive Biology*, 111(1), 25-32.
- Hammersley, M., & Atkinson, P. (2007). *Ethnography: Principles in practice*: Routledge.
- Hark, L., & DeLisser, H. (2011). *Achieving cultural competency: A case-based approach to training health professionals*: John Wiley & Sons.
- Irminger-Finger, I., Jastrow, N., & Irion, O. (2008). Preeclampsia: a danger growing in disguise. *The international journal of biochemistry & cell biology*, 40(10), 1979-1983.
- Khowaja, A. R. (2015). [205-POS]: Methodology for assessing the feasibility of community level interventions for pre-eclampsia in South Asian and African contexts. *Pregnancy Hypertension: An International Journal of Women's Cardiovascular Health*, 5(1), 103. doi: <http://dx.doi.org/10.1016/j.preghy.2014.10.211>
- Khowaja, A. R., Qureshi, R. N., Sheikh, S., Zaidi, S., Salam, R., Sawchuck, D., . . . Bhutta, Z. (2015). [241-POS]: Community perceptions of pre-eclampsia in Sindh, Pakistan: A qualitative study. *Pregnancy Hypertension: An International Journal of Women's Cardiovascular Health*, 5(1), 121-122. doi: <http://dx.doi.org/10.1016/j.preghy.2014.10.247>
- Kleinman, A. (1978). Concepts and a model for the comparison of medical systems as cultural systems. *Social Science & Medicine. Part B: Medical Anthropology*, 12, 85-93.
- Leather, A., Ismail, E. A., Ali, R., Abdi, Y. A., Abby, M. H., Gulaid, S. A., . . . Lowe-Lauri, M. (2006). Working together to rebuild health care in post-conflict Somaliland. *The Lancet*, 368(9541), 1119-1125.
- Lin, S., Leonard, D., Co, M. A. M., Mukhopadhyay, D., Giri, B., Perger, L., . . . Uddin, M. N. (2015). Pre-eclampsia has an adverse impact on maternal and fetal

- health. *Translational Research*, 165(4), 449-463. doi: <http://dx.doi.org/10.1016/j.trsl.2014.10.006>
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalist inquiry*. Beverly Hills, CA: Sage.
- Lyell, D. J., Lambert-Messerlian, G. M., & Giudice, L. C. (2003). Prenatal screening, epidemiology, diagnosis, and management of preeclampsia. *Clinics in Laboratory Medicine*, 23(2), 413-442. doi: [http://dx.doi.org/10.1016/S0272-2712\(03\)00027-1](http://dx.doi.org/10.1016/S0272-2712(03)00027-1)
- Malterud, K. (2012). Systematic text condensation: a strategy for qualitative analysis. *Scandinavian Journal of Public Health*, 40(8), 795-805.
- Marshall, C., & Rossman, G. B. (2010). *Designing qualitative research*: Sage publications.
- Mastroianni, A. C., Faden, R., & Federman, D. (1994). *Women and Health Research:: Ethical and Legal Issues of Including Women in Clinical Studies* (Vol. 1): National Academies Press.
- Mundle, S., Regi, A., Easterling, T., Biswas, B., Bracken, H., Khedekar, V., . . . Winikoff, B. (2012). Treatment approaches for preeclampsia in low-resource settings: A randomized trial of the Springfusor pump for delivery of magnesium sulfate. *Pregnancy Hypertension: An International Journal of Women's Cardiovascular Health*, 2(1), 32-38. doi: <http://dx.doi.org/10.1016/j.preghy.2011.09.002>
- Murray, C. J., & Frenk, J. (2000). A framework for assessing the performance of health systems. *Bulletin of the world Health Organization*, 78(6), 717-731.
- Musgrove, P. (1999). Public spending on health care: how are different criteria related? *Health policy*, 47(3), 207-223.
- O'Donnell, O. (2007). Access to health care in developing countries: breaking down demand side barriers. *Cadernos de Saúde Pública*, 23(12), 2820-2834.
- Organization, W. H. (2010). Maternal mortality in 2005. Estimates developed by WHO, UNICEF, UNFPA, and The World Bank.
- Organization, W. H. (2013). Saving the lives of mothers and children: rising to the challenge in Somalia.
- Osungbade, K. O., & Ige, O. K. (2011). Public health perspectives of preeclampsia in developing countries: implication for health system strengthening. *Journal of pregnancy*, 2011.
- Patton, C. M. (2014). Conflict in Health Care: A Literature Review. *The Internet*

- Journal of Healthcare Administration*, 9(1).
- Patton, M. Q. (1999). Enhancing the quality and credibility of qualitative analysis. *Health services research*, 34(5 Pt 2), 1189.
- Patton, M. Q. (2005). *Qualitative research*: Wiley Online Library.
- Penny, J., Shennan, A., Halligan, A., Taylor, D., De Swiet, M., & Anthony, J. (1997). Blood pressure measurement in severe pre-eclampsia. *The Lancet*, 349(9064), 1518.
- Penny, J. A., Shennan, A. H., Halligan, A. W., Taylor, D. J., de Swiet, M., & Anthony, J. Blood pressure measurement in severe pre-eclampsia. *The Lancet*, 349(9064), 1518. doi: 10.1016/S0140-6736(05)62096-X
- Pettit, F., & Brown, M. A. (2012). The management of pre-eclampsia: what we think we know. *European Journal of Obstetrics & Gynecology and Reproductive Biology*, 160(1), 6-12. doi: <http://dx.doi.org/10.1016/j.ejogrb.2011.09.049>
- Pettit, F., Mangos, G., Davis, G., Henry, A., & Brown, M. A. (2015). Pre-eclampsia causes adverse maternal outcomes across the gestational spectrum. *Pregnancy Hypertension: An International Journal of Women's Cardiovascular Health*, 5(2), 198-204. doi: <http://dx.doi.org/10.1016/j.preghy.2015.02.002>
- Pope, C., & Mays, N. (2013). *Qualitative research in health care*: John Wiley & Sons.
- Prince, R. J., & Otieno, P. (2014). In the shadowlands of global health: Observations from health workers in Kenya. *Global public health*, 9(8), 927-945.
- Redman, C. W. G. (2014). The six stages of pre-eclampsia. *Pregnancy Hypertension: An International Journal of Women's Cardiovascular Health*, 4(3), 246. doi: <http://dx.doi.org/10.1016/j.preghy.2014.04.020>
- Repke, J. T., & Robinson, J. N. (1998). The prevention and management of pre-eclampsia and eclampsia. *International Journal of Gynecology & Obstetrics*, 62(1), 1-9. doi: [http://dx.doi.org/10.1016/S0020-7292\(98\)00082-4](http://dx.doi.org/10.1016/S0020-7292(98)00082-4)
- Rowe, A. K., de Savigny, D., Lanata, C. F., & Victora, C. G. (2005). How can we achieve and maintain high-quality performance of health workers in low-resource settings? *The Lancet*, 366(9490), 1026-1035.
- Samatar, S. S. (2002). Unhappy masses and the challenge of political Islam in the Horn of Africa. *Horn of Africa*, 20, 1-10.
- Sandelowski, M. (1994). Focus on qualitative methods. The use of quotes in qualitative research. *Research in nursing & health*, 17(6), 479-482.
- Sandelowski, M. (1995). Sample size in qualitative research. *Research in nursing &*

- health*, 18(2), 179-183.
- Schocken, D. M., Runyan, A., Willieme, A., & Wilson, J. (2013). Medical hierarchy and medical garb. *Virtual Mentor*, 15(6), 538-543. doi: 10.1001/virtualmentor.2013.15.6.imhl1-1306
- Shah, D. A., & Khalil, R. A. Bioactive factors in uteroplacental and systemic circulation link placental ischemia to generalized vascular dysfunction in hypertensive pregnancy and preeclampsia. *Biochemical Pharmacology*(0). doi: <http://dx.doi.org/10.1016/j.bcp.2015.04.012>
- Shenton, A. K. (2004). Strategies for ensuring trustworthiness in qualitative research projects. *Education for information*, 22(2), 63-75.
- Sibai, B. M., Committee, P., & Medicine, S. f. M.-F. (2011). Evaluation and management of severe preeclampsia before 34 weeks' gestation. *American Journal of Obstetrics and Gynecology*, 205(3), 191-198.
- Solberg, L. I. (2007). Improving medical practice: a conceptual framework. *The Annals of Family Medicine*, 5(3), 251-256.
- van Dijk, M. G., Díaz Olavarrieta, C., Zuñiga, P. U., Gordillo, R. L., Gutiérrez, M.-E. R., & García, S. G. (2013). Use of magnesium sulfate for treatment of pre-eclampsia and eclampsia in Mexico. *International Journal of Gynecology & Obstetrics*, 121(2), 110-114. doi: <http://dx.doi.org/10.1016/j.ijgo.2012.11.015>
- Varkevisser, C. M., Pathmanathan, I., & Brownlee, A. T. (1993). *Designing and conducting health systems research projects* (Vol. 2): IDRC.
- Wagner, L. K. (2004). Diagnosis and management of preeclampsia. *Am Fam Physician*, 70(12), 2317-2324.
- World Health Organization, & UNICEF. (2007). Maternal mortality in 2005: estimates developed by WHO, UNICEF, UNFPA, and The World Bank.
- World Health Organization Fact Sheet, May 2012.
- Zakiyah, N., van, A. A., Baker, P., & Postma, M. J. (2014). PIH14 - Economic Assessment of Preeclampsia: Screening, Diagnosis, Treatment Options, and Long Term Outcomes, A Systematic Review. *Value in Health*, 17(7), A506-A507. doi: <http://dx.doi.org/10.1016/j.jval.2014.08.1544>

## APPENDICIES I – VIII

## **APPENDIX I – CONSENT FORM IN ENGLISH**

### **CONSENT FORM FOR HEALTHCARE PROVIDERS**

**Study title: Perceptions on preeclampsia and its management in Hargeisa, Somaliland**

#### **Background and purpose of the study**

This is a request inviting you to participate in a research study on the perceptions of health workers on the management of preeclampsia in hospital settings. The objective of this study is to explore and illustrate the views of health care providers on the management of patients with preeclampsia and the complications it leads to and to identify the gaps in management as well as the challenges faced in the management of patients with preeclampsia referred from mother and child health care services (MCHs) and those that are self admitted.

#### **What does the study entail?**

The study will involve the following, I will be asking you for information about your work experience and thoughts regarding preeclampsia, the factors which make the management of patients with preeclampsia easier or more difficult for you, what barriers you face regarding proper management of preeclampsia, what you would like to be improved at the hospital which would facilitate better management of preeclampsia. I will also be asking you some background information which may will not include your name or profession. The interview will take approximately 45 to 50 minutes of your time and shall be audio taped for analysis after the interview.

The information that you provide during this study will be kept completely confidential. Only the interviewer and researchers will have access to the audio taped interviews and the transcripts made from them. This information will be destroyed on the completion of the study.

#### **Benefits of the study**

By participating in this study and answering our questions, you will be helping to increase our understanding on how patients of preeclampsia are managed at the hospital level. It would also help you as a health care provider to reflect upon your own efforts in the management of preeclampsia in the future. We hope that the results gained from this study will improve the quality of care provided to patients with preeclampsia.

I would like you to know that your participation in this study is completely voluntary and you have the right to refuse to participate or answer any questions which you feel uncomfortable with. If you change your mind about participating during the course of the study, you have

the right to withdraw from the study at any time. Your decision to withdraw will not affect your work or position in any way.

If there is anything that is unclear or you need further information, I would be happy to share it with you.

Do you have any questions that you would like me to clarify?

**Declaration of the participant:**

I have understood the purpose of the study is to describe the perceptions on the management of patients with preeclampsia at the hospital level and to identify the gaps and barriers in the management of patients with preeclampsia.

I realise that I might be contacted again in a few weeks' time to be re-interviewed for further clarification of the information I give in the initial interview.

I have read the above information, or it has been read to me. I have also had the opportunity to ask questions about it and any questions that I have asked have been answered to my satisfaction. I hereby give my consent to voluntarily participate in this study and understand that I have the right to withdraw from the study at any time without it affecting my work position in any way.

**Consent of the participant in the study:**

I am willing to participate in the study and I confirm that I have given information about the study.

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**Signature of the project participant and date**

**Signature of Researcher/research assistant:**

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**Signature and date**

**APPENDIX II – CONSENT FORM IN SOMALI**

## FOOMKA OGOLAANSHAA SHAQAALAAH DARYEELKA CAAFIMAADKA

**Cinwaanka Daraasadda: Aragtiyaha laga qabo Dhiigkarka-Uurku-Keeno (Preclampsia) iyo sida Hargeysa, Somaliland, loogu maaamulo**

### **Salka iyo Ujeedada Daraasadda**

Foomkana waa weydiisi lagu weydiisanayo shaqaalaha daryeelka caafimaadka in ay ka qayb qaataan daraasad lagu sameynaayo sida goobaha cusbatalada loogu maamulo Dhiigkar-Uurku-Keeno. Ujeedada daraasadani waxa weeye in ay sahamiso oo muujiso aragtiyaha ay ka leeyihiin shaqaalaha caafimaadku -

- maamulka bukaanka qaba dhiigkar-uurku-keeno iyo dhibaatooyinkiisa.
- qeexidda goldaloolooyinka maamulka cudurkaasi.
- iyo dhaabadaha ama carqaladaha ka hor yimaada maamulka bukaankan cudurkaasi qaba ee laga soo xawilo MCH-yada ama iskoofa u yimaada cusbatala.

Waxayaalaha daraasaddu koobayso waxa ka mid ah in aan waxa kaa weydiiyo waao-aragnimada aad u leedahay dhiigkarka-uurku-keeno iyo sida aad u aragto: waxyaalaha kuu fududeeya ama ku dhiba marka aad maamulayso dhiigkarka-uurku-keeno: dhaabadaha kaa hor yimaada: waxyaalaha aad isleedahay way horumarin lahaayeen maamulka cudurkan marka cusbatala la joogo. Waxan kaloo wax kaa weydiinyaa noloshaada iyada oo aan la sheegayn magacaaga. Wareysigu wuxu qaadanayaa 45 ilaa 50 dhaqiiqo codkaagana waan duubayaa si aan u derso wareysiga ka dib.

Wixii war ah ee aad wareysiga ku bixiso waxa loo la dhaqmayaa in ay yihiin xogo sir ah. Wareysiga la duubona waxa keliya oo u gacan banaan xog-ururiyaha iyo cilmibaadhayaasha daraasaddan ku shuqul leh. Ka dib marka daraasaddu dhamaatona, xogtan waa tirtirya.

### **Faa'iidooyinka Daraasadda**

Ka qayb qaadashada aad ka qayb qaadatid daraasaddan oo aad ka jawaabtid su'aalaha, waxay caawimo u tahay sida aynu u kordhin lahayn garashada maamulka dhiigkar-uurku-keeno marka lagu maamulayo cusbatalada. Waxaynu filaynaa in natiijada daraasaddani wax ka tari doonto kor u qaadista iyo tayaynta daryeelka ay u baahanyihiin bukaanka dhiigkar-uurku-keeno. Waxa kale oo ay keeni kartaa in aad u hoos u fiirso sida aad imika u maamusho cudurkan iyo sidii aad maamulkaga kor ugu qaadi lahayd.

Waxan jecelahay in aan kuu sheego in ka qayb qaadashada aad ka qayb qaadataa daraasaddani ay tahay caawimo; xaqna aad u leedahay in aad diido in aad ka jawaabto wixii su'aalo ah ee aanad murtaax ku ahayn. Ta kale, haddii aad isbedesho oo aad doonto in aad joojis ka qayb qaadashada daraasaddan, waad yeel kartaa sidaasi inta ay daraasaddu soconayso. Go'aanka aad gaadhaa in aad ka hadho ka qayb qaadashada daraasaddan, waxba u dhimi ma saamayno shaqadaada iyo xilkaaga.

Haddii ay jiraan wax mugdi kaaga jiro: ama aad u baahato war dheeraada, diyaar ayaan kuu ahay.

Ma jiraan wax su'aalo ah oo aad i weydiinaysaan?

#### **Qiraal**

Waxa aan qirayaa in aan gartay in ujeedada daraasaddani tahay in la tilmaamo siyaabah loo arko in loo maamulo bukaanka qaba dhiigkarka-uurku-keenoe ee ku sugan cusbataalka. Iyo in la ogaado goldalooloolyinka iyo dhaabadaha hor yaala maaulka bukaanka qaba cudurkani.

Waxa layla soedsiiyay in layla soo xidhiidh doono. haddii lay baahdo, ka dib marka aan cusbataalka ka baxo: oo lay waraysan karo mar dambe iyada oo la hubinayo xogtii aan ku bixiyay waraysigii hore.

Warka kor ku xusan waan akhriyay ama waa lay akhriyay. Waxa kale oo lay siiyay fursad aan su'aalo ka weydiyo. Su'aalihii oo dhana si i raali gelisay ayaa laygaga jawaabay. Sidaa darteed, waxa aan ogolaaday in aan si caawimo ah ugu qayb qaato daraasaddan; aniga oo fahamsan in aan xaq u leeyahay in aan marka doono ka baxi karo iyada aan ka bixistaasi saamaynay shaqadayda iyo xilkayga.

#### **Ogolaansha ka Qaybqaataha Daraasadda**

Waxan diyaar u ahay in aan ka qaybqaato daraasaddan; waxaanaan qirayaa in aan bixiyay war ku saabsan daraasaddan.

#### **Magaca iyo Saxeexa ka Qaybqaataha iyo Taariikhda**

#### **Magaca iyo Saxeexa Cilmibaadhaha/Kaaliya Cilmibaadhaha iyo Taariikhda**

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## APPENDIX III – CHECKLIST OF SUPPLIES

Checklist of supplies:

Name of Hospital:

Health personnel:

Supplies & equipment for the management of Pre-eclampsia & Eclampsia:

Item	Yes	No	If No, for how long
Guidelines			
BP machine			
Stethoscope			
Fetoscope			
Ambu bag			
Oxygen cylinders			
Urinary catheters (Foley catheter)			
Magnesium sulphate			
Diazepam			
Phenytoin			
Hydralazine			
Dexamethasone			
Aldomet			
Nifedipine			
Oxytocin			
Promethazine			
Diazepam			

## APPENDIX IV – THE INTERVIEW GUIDE IN ENGLISH

### INTERVIEW GUIDE

#### PERCEPTIONS ON PREECLAMPSIA AND ITS MANAGEMENT IN HARGEISA, SOMALILAND

**Introduction: Self introduction, name and general affiliation**

#### **I. DEMOGRAPHIC INFORMATION**

**Age:**

**Profession:**

**Work Experience:**

#### **II. HEALTH WORKER WORK EXPERIENCE**

- 1. How long have you been working in this ward?  
(student doctors relevant)**
- 2. How long have you been working in this hospital?  
(Other health workers)**
- 3. How many obstetrics complications do you see on average in a month?**

#### **III. KNOWLEDGE AND PERCEPTION OF PREECLAMPSIA**

- 1. What does 'Preeclampsia' mean to you?**  
**Probe:** Let the interviewee explain to you what they understand preeclampsia to be
- 2. Do the women with preeclampsia you treat have any knowledge or idea about their condition?**  
**Probe:** Have they asked them about the patient's knowledge and perception on preeclampsia?
- 3. What do you think are your colleagues' perceptions and knowledge of preeclampsia? (What about the complications it leads to?)**  
**Probe:** Do all the health workers in the ward understand what it is? Know about the signs and symptoms, treatment?

#### **IV. PATIENT MANAGEMENT EXPERIENCES**

- 1. How are the patients with preeclampsia first identified?**  
**Probe:** Ask if they first diagnosed at the hospital or are they diagnosed elsewhere?

2. **Where are the women with preeclampsia often referred from?**  
**Probe:** MCH, Outpatient clinics, Self-referrals?
3. **Could you tell me what are the steps you take when managing preeclampsia?**  
**Probe:** guidelines, medications, instruments, are there any problem with any of these?
4. **What do you have at your hospital to effectively care for patients with preeclampsia?**  
**Probe:** Medicine, equipment i.e. BP, dip sticks
5. **Would you say you are comfortable with the administration of Magnesium Sulphate?**  
**Probe:** Can use the drug properly, any challenges with use.
6. **Are there any other drugs you use to treat patients with preeclampsia other than Magnesium Sulphate?**
7. **Are these drugs readily available?**  
**Probe:** Any challenges faced with availability.
8. **In your experience, have you encountered patients using alternative methods other than the treatment you provide?**  
**Probe:** Ask them to relate their experiences  
**Prompt:** Ask how do they feel, what are their perceptions?
9. **What do you think were your patients' thoughts about the services you provide compared to other services they may have received earlier?**

#### **V. WORK PLACE EXPERIENCES**

1. **What are the challenges you face in your daily work at the ward?**  
**Probe:** Ask them to relate their experiences with fellow staff members, treating patients, dealing with patient's relatives.  
Any gaps or barriers they see in the health care services they provide.
2. **The first time you started providing management care to women with preeclampsia, what were the challenges you faced?**
3. **Tell me about the last time you treated a patient with preeclampsia**  
**Probe:** Any differences seen from the first experience and the last.
4. **Would you say you are a 100 percent satisfied with the care that you provide at the moment?**  
**Probe:** Ask if they feel anything is missing? How well do they think their management care meet the needs of their patients?

**VI. NEEDS OF HEALTH CARE WORKER / CARE GIVER.**

- 1. What are the needs which you feel the administrative personnel (Hospital Director, the MOH) can help you with?**

**Probe:**

- Management wise?
- Equipment?
- Technical support i.e. training?

**Prompt:** Ask how well do you think that the administrative services are meeting those needs they mention? (after each of above sections)

- 2. What could the administrative services do to help you to meet your needs?**

**Probe:** Take them through the needs that they have identified from the above list and ask them to give suggestions that may have to help the better management care and services to meet these needs

**VI. ABOUT THE MANAGEMENT OF PATIENTS WITH COMPLICATIONS OF PREECLAMPSIA:**

- 1. Do you think that there is a need for the current services at this hospital to change in order to meet the needs of patients who develop complications of preeclampsia?**

**Probe:** If yes, what are the changes they feel need to occur?

If yes, what would be the main features of the new services be?

- 2. Is what you currently have at the hospital adequate in management of complications?**

- 3. If not, what is lacking in your health center to effectively care for these patients?**

**Probe:** Ask about equipment, and skills, supervision, drugs.

**VII. SUGGESTED RECCOMENDATIONS FOR IMPROVEMENT**

- 1. Should there be measures taken by the patient before arriving at the hospital?**
- 2. Do you think the provision of written or oral information be useful to the patient in rising awareness about preeclampsia?**
- 3. What other material do you think would help raise awareness?**  
**Probe:** Posters? Leaflets? TV broadcasts? Radio broadcasts? Local skits?
- 4. What other recommendations would you give to the MoH to improve preeclampsia management in Somaliland?**

**FINALLY;**

Thank you for your time. Do you have any questions that you would like to ask me?

## **APPENDIX V – THE INTERVIEW GUIDE IN SOMALI**

### **TUSAHA WARAYSI BADH-HABAYSAN**

#### **ARAGTIYAHA LAGA HAYSTO CUDURKA DHIIGKARKA-UURKU-KEENO IYO SIDA LOOGA MAAMULO CUSBATAALADA SOMALILAND**

Hordhac: Qofka la-waraystaha ah magaciisa iyo astaamihiisa kale

#### **I. XOGTA LA-WARAYSTAHA**

Da'da:

Xaaladda Bulsho:

Mihnadda:

Khibradda Shaqo:

Fursad sii la-waraystaha uu sheekadiisa ku sheego. Adeegso weydiimo horyseed ah iyo qaar dabagal ah marka aad xog qoto dheer doonayso.

#### **II. KHIRBADDA SHAQAALAHA CAAFIMAADKA**

1. Intee baad waadhka ka shaqaynayay?  
(Waa la weydiin karaa su'aasha ardayda dhakhtarnimada baranaysna.)
2. Intee baad cusbataalka ka shaqaynaysay?  
(Shaqaalaha aan dhakhtarada ahayn ayaa la weydiinayaa.)
3. Marka layku celceliyo dhibaatooyinka cudurada dumarka uurka leh ee aad bishii aragtaa waa imisa?

#### **III. AQOONTA IYO ARAGTIDA DHIIGKARKA-UURKU-KEENO**

1. Sidee baad dhiigkarka-uurku-keeno u macnayn lahayd?  
Horseed: Fursad sii la-waraystaha si uu kuugu sheego sida uu fahamsanyhay dhiigkarka-uurku-keeno.
2. Dumarka qaba dhiigkarka-uurku-keeno ee aad dawaysaa aqoon maw leeyihiin xaaladda ay ku suganyihiin?  
Horseed: Haddii ay yihiin shaqaalaha caafimaadka, ma weydiyaan bukaanka aqoonta iyo aragtida ay u leeyihiin dhiigkarka-uurku-keeno.
3. Shaqaalaha caafimaadka ee kula shaqeeyaa waa sidee aqoonta ay u leeyihiin dhiigkarka-uurku-keeno?  
Horseed: Shaqaalaha caafimaadka oo dhami ma fahamsanyihiin wuxu cudurkan yahay? Ma garnayaan astaamihiisa, calaamadihiisa, iyo dawdiisa?

#### **IV. KHIRBADDA MAAMULKA BUKAANKA?**

1. Sidee marka ugu horaysa loo ogaadaa dumarka qaba dhiigkarka-uurku-keeno?  
Horseed: Waxad weydisaa ma cusbataalka ayay yimaadaan oo lagu ogaadaa mise meelo kale ayay tagaan oo lagu ogaadaa?

2. Xagee laga soo gudbiyaa bukaanka qabo dhiigkarka-uurku-keeno?  
Horseed: Ma waxay ka yimadaan MCH yada, cusbataalda khaaska ah, mise iskooda ayay u yimaadaan?
3. Waxad ii sheegtaa talaabooyinka aad qaado marka aad maamulayso dhiigkarka-uurku-keeno?  
Horseed: dariiqada la raaco, dawooyinka, qalabka wax dhibaatooyin ahi ma ka jiraan? Waxad u sheegtaa dariiqada WHO iyo dariiqadii hore.
4. Maxaad cusbataalka ku haysataan si aad bukaanka u siisaan daryeel sugan?  
Horseed: dawo, qalab, BP, Dip Stick, iwm.
5. Ma kula tahay in aad si kalsooni leh u bixin karto Magnesium Sulphate?  
Horseed: Dawadaa sidii habooneed maw isticmaali kartaa? Wax carqalada ahi ma jiraan?
6. Magnesium Sulphate mooyee, ma jiraan dawooyin kale oo aad isticmaashaan?
7. Dawooyinkaasi kale, ma la helaa? Miyay jiraan wax carqalada ah oo la xidhiidha helitaan kooda?
8. Adigu khihradaada, ma la kulantay bukaan adeegsanaya hab aan ahayn habka aa u cudurkan u dawaysaan?  
Horseed: Wax ka weydii wixii khihrad ahaan ka soo maray bukaanka.  
Dabagal: Waa maxay dareen kooda la xidhiidha arrintaa? Sidee se u arkaan?
9. Sidee baad u malaynaysaa inay bukaanku u arkaan adeeg caamfimaad ee aad siisaan marka ay barbar dhigaan ka meel kale ka heleen?  
Horseed: Ma jeclaysteen? Yaa daryeelay?

#### V. KHIRADDA SHAQO

1. Waa maxay dhibaatooyinka aad la kulanto marka aad shaqadaad ku gudnayso waadhka?  
Horseed: Waxa aad wax ka weydiisaa sida ay u wada shaqeeyaan shaqaalaha kale, siday bukaanka u daweeyaan, sida ay ula dhaqmaan ehelka bukaanka.  
Wixii goldaloolayn ah ama dhibaatooyin ah ee ka jira adeegga caafimaad ee cusbataalka.
2. Markii kuugu horeeyay ee aad maamusho gabadh qabto dhiigkarka-uurku-keeno, maxaa caqabada ah ee aad la kulantay?
3. Waxad ii sheegtaa markii kuugu dambaysay ee aad maamusho gabadh qabta dhiigkarka-uurku-keeno.  
Horseed: Maxaa u dhexeeyay labadaad aragtiyood, ta hore iyo ta dambe?
4. Ma odhan kartaa 100% ayaan raali ka ahay maamulka aan imika ku daweeyo bukaanka?  
Horseed: Miyaad dareensantahay in wax kaa dhiman yihiin? Ma u malaynaysaa in maamulka xanaano ee uu u baahanyahay bukaanka loo siiyo sidii haboonayd?

#### VI. BAAHIDA SHAQAALAHAA CAAFIMAADKA

1. Waa maxay baahiyaha aad uga baahantihiin maamulka cusbataalku (Mumulaha ama Wasaaradda Caafimaadka) in ay idinka caawiyaan?

Horseed:

- Dhinaca maamulka
- Dhinaca qalabka

- Dhinaca farsamada la xidhiidha tababarka
- Dhinaca maaliyadda

Dabagal: Waxad weydiisaa, “Sideed u malaynaysaa in maamulku ugu dadaalo in ay bahaahiyahaasi wax ka qabtaan?

2. Maxay maamulku qaban karaan oo wax ka tari kara baahiyaaga?

Horseed: Waxad dul marisaa baahiyaha ay sheegeen ee la xidhiidha qodobada kor ku xusan; waxanaad weydiisaa in ay sameeyaan soo jeedinao wax ka taraya inay kor u qaadaan adeegga caafimaad ee bixiyaan haddii ay helaan.

#### VII. MAAMULKA DHIABAATOYINKA BUKAANKA DHIIGKARKA-UURKU-KEENO

1. Maw malaynaysaa in wax laga beddelo adeegga cusbataalka bixiyo ee la xidhiidha maamulka dhibaatooyinka bukaanka dhiigkarka-uurku-keeno?

Horseed: Haddii ay jawaabtu haa tahay, waa maxay waxa loo baahanyahay in la beddelo? Ama waa maxay waxyaalaha ay tahay in la soo kordhiyo?

2. Waxa imika aad cusbataalka ku haystaan ma idiku filanyahay in aad dhibaatooyinka maamushaan?
3. Haddii aanay idinku filayn, maxaa cusbataalkiina ka maqan ee loogu bahaanyahay maamulka dhibaatooyinka cudurka?

#### VIII. SOOJEEDIN LA XIDHIIDDHA HORUMARINTA

1. Maxay kula tahay in la smaeeyo sidii hore loogu marin lahaa maamulka bukaanka qaba dhiigkarka-uurku-keeno ee aad u dhiibaataysan?
2. Maxay u baahanyihiin bukaanku inay sameeyaan inta aanay cusbataalka soo qaadhin?
3. Miyaad u malaynaysaa wacyigelin hadal ama qoraal ahi inay kor u qaadi karto aqoonta dumarku u leeyihiin dhiigkarka-uurku-keeno?
4. Maxay yihiin waxyaalaha loo adeegsan karo wacyigelinta? Horseed: Qoraalo, TV, Radio, Riwaayado.
5. Maxay kale ayaad u soo jeedin lahayd Wasaaradda Caafimaadku in ay samayso si hore loogu mariyo maamulka dhiigkarka-uurku-keeno?

Ugu dambayn

Aad baad u mahadsantahay. Ma jiraan wax su’aalo ah oo jeceshahay inaad i weydiiso?

## APPENDIX VI – REK ETHICAL CLEARANCE LETTER



<b>Region:</b>	<b>Saksbehandler:</b>	<b>Telefon:</b>	<b>Vår dato:</b>	<b>Vår referanse:</b>
REK sør-øst	Vivi Opdal	22845526	26.06.2014	2014/911/REK sør-øst A
			<b>Deres dato:</b>	<b>Deres referanse:</b>
			13.05.2014	

Vår referanse må oppgis ved alle henvendelser

Amal Yassin  
Universitetet i Oslo

### 2014/911 Oppfatninger om svangerskapsforgiftning og dets ledelse i Hargeisa, Somaliland

**Forskningsansvarlig:** Universitetet i Oslo  
**Prosjektleder:** Amal Yassin

Vi viser til søknad om forhåndsgodkjenning av ovennevnte forskningsprosjekt. Søknaden ble behandlet av Regional komité for medisinsk og helsefaglig forskningsetikk (REK sør-øst) A i møtet den 12.06.2014. Vurderingen er gjort med hjemmel i helseforskningsloven § 10, jf. forskningsetikklovens § 4.

#### Prosjektbeskrivelse

Det overordnede målet med prosjektet er å utvikle en oppfatning om at forskning er nyttig blant helsearbeidere og politikere i Somaliland. Videre vil helsearbeidere og politikere bli gjort oppmerksom på at tiltak for å redusere dødelighet av preeklampsi er nødvendig. Det primære målet med prosjektet er å sammenligne kunnskap om og tiltak mot preeklampsi i to sykehus i hovedstaden, et stort gammelt offentlig sykehus og et nyere privat sykehus.

Dødelighet hos gravide kvinner er meget høy i Somaliland. Journaler fra pasienter med preeklampsi på begge sykehus skal studeres. Ti helsearbeidere og to pasienter ved hvert av sykehusene skal intervjues. Deres forestillinger om hva preeklampsi er skal kartlegges.

Videre skal forskeren observere hvilke beredskap og tiltak mot preeklampsi og eklampsi som foreligger begge steder. Enkle spørsmål skal føre til utvikling av en intervjuguide, for eksempel:

- Kjenner helsearbeidere tegn på tidlig eklampsi?
- Hva finnes av utstyr (sjekkes mot en liste), finnes for eksempel blodtryksmålere? I så fall, brukes de?

#### Vurdering

Etter komiteens vurdering er ikke denne type forskning medisinsk og helsefaglig forskning etter helseforskningslovens definisjon.

Hva som er medisinsk og helsefaglig forskning fremgår av helseforskningsloven § 4 bokstav a hvor medisinsk og helsefaglig forskning er definert slik: "virksomhet som utføres med vitenskapelig metodikk for å skaffe til veie ny kunnskap om helse og sykdom". Formålet er avgjørende, ikke om forskningen utføres av helsepersonell eller på pasienter eller benytter helseopplysninger.

**Besøksadresse:**  
Gullhaugveien 1-3, 0484 Oslo

**Telefon:** 22845511  
**E-post:** [post@helseforskning.etikk.no](mailto:post@helseforskning.etikk.no)  
**Web:** <http://helseforskning.etikk.no/>

All post og e-post som inngår i saksbehandlingen, bes adressert til REK sør-øst og ikke til enkelte personer

Kindly address all mail and e-mails to the Regional Ethics Committee, REK sør-øst, not to individual staff



Etter komiteens vurdering er dette et kvalitetssikringsprosjekt. Medisinsk og helsefaglig forskning handler som sagt om opparbeidelse av ny kunnskap, for eksempel om hva som er eller bør være beste behandlingsmetode. Kvalitetssikring handler mer om å sikre kvaliteten på helsetjenesten fremfor å frembringe ny kunnskap, for eksempel ved å studere om beste behandlingsmetode følges.

#### **Vedtak**

Prosjektet faller utenfor helseforskningslovens virkeområde, jf. § 2, og kan derfor gjennomføres uten godkjenning av REK. Det er institusjonens ansvar å sørge for at prosjektet gjennomføres på en forsvarlig måte med hensyn til for eksempel regler for taushetsplikt og personvern.

Komiteens vedtak kan påklages til Den nasjonale forskningsetiske komité for medisin og helsefag, jf. helseforskningsloven § 10 tredje ledd og forvaltningsloven § 28. En eventuell klage sendes til REK sør-øst A. Klagefristen er tre uker fra mottak av dette brevet, jf. forvaltningsloven § 29.

Med vennlig hilsen

Knut Engedal  
Professor dr. med.  
Leder

Vivi Opdal  
seniorrådgiver

**Kopi til:** [johanne.sundby@medisin.uio.no](mailto:johanne.sundby@medisin.uio.no); [universitetsdirektor@uio.no](mailto:universitetsdirektor@uio.no)

## APPENDIX VII –HOME COUNTRY ETHICAL CLEARANCE



Ref: MoH/DG/1238 2.00 /2014

Date: October 19, 2014

To: To Whom It My Concern


**Approval of Research: Perceptions on preeclampsia and Its Management in Hargeisa Somaliland**

Dear Colleague

Having seen your request to do the research titled "Perceptions on Preeclampsia and Its Management" in Hargeisa Somaliland, we hereby recognize its importance, and MoH is happy to approve your proposal and endorse the stated research to be conducted.

The Ministry of Health will provide any necessary support you may require during this mission.

Yours Sincerely

  
**Dr. Osman Hussein Warsame**  
Director General of the Ministry of Health  
Republic of Somaliland

## APPENDIX VIII – NSD APPROVAL LETTER

Norsk samfunnsvitenskapelig datatjeneste AS  
NORWEGIAN SOCIAL SCIENCE DATA SERVICES



Harald Hårfagres gate 29  
N-5007 Bergen  
Norway  
Tel: +47-55 58 21 17  
Fax: +47-55 58 96 50  
nsd@nsd.uib.no  
www.nsd.uib.no  
Org.nr. 985 321 884

Johanne Sundby  
Det medisinske fakultetet  
Universitetet i Oslo  
Postboks 1078 Blindern  
0316 OSLO

Vår dato: 18.05.2015

Vår ref: 42788/3/MHM/RH

Deres dato:

Deres ref:

### TILBAKEMELDING PÅ MELDING OM BEHANDLING AV PERSONOPPLYSNINGER

Vi viser til melding om behandling av personopplysninger, mottatt 14.3.2015. All nødvendig informasjon om prosjektet forelå 29.4.2015. Meldingen gjelder prosjektet:

42788  
Daglig ansvarlig  
Student

*Perceptions on preeclampsia and its management in Hargeisa, Somaliland*  
Johanne Sundby  
Amal Yassin

Personvernombudet har vurdert prosjektet på bakgrunn av den informasjon vi har fått om gjennomføringen, og finner at behandlingen av personopplysninger er omfattet av meldeplikten iht. personopplysningsloven § 31.

Personvernombudet registrerer at datainnsamlingen startet opp 1.9.2014. I brev datert 6.3.2015 skriver Institutt for helse og samfunn at flere prosjekt ved masterprogrammet «International Community Health (ICH) ved en feiltakelse ikke har blitt meldt til NSD etter at de ble vurdert til å falle utenfor helseforskningsloven av REK, og at det nå ryddes opp i dette.

Personvernombudet finner det positivt at instituttet har oppdaget avvikene og nå rydder opp. Vi anbefaler at instituttet fremover gir god opplæring til forskere, studenter og veiledere om at meldeplikten til personvernombudet gjelder dersom det skal behandles personopplysninger til forskningsformål som ikke omfattes av helseforskningsloven. Prosjekter som omfattes av meldeplikten skal meldes senest 30 dager før oppstart. I prosjekter som foretar elektronisk behandling av sensitive personopplysninger skal det også foreligge tilrådning fra personvernombudet eller konsesjon fra Datatilsynet før behandlingen tar til. Brudd på meldeplikten innebærer at det har vært foretatt behandling av personopplysninger uten gyldig behandlingsgrunnlag i henhold til personopplysningslovens bestemmelser.

Brudd på meldeplikten innebærer samtidig et brudd på Universitetet i Oslo sine prosedyrer for internkontroll med personvern i forskning. Det vises til avtale mellom Universitetet i Oslo og personvernombudet ved NSD. Personvernombudets forhåndskontroll av meldepliktige forskningsprosjekter inngår som en viktig del av den lovpålagte internkontrollen Universitetet i Oslo gjennomfører med sin behandling av personopplysninger. I avtalen mellom NSD og Universitetet i Oslo fremgår det at prosjekter som skal foreta behandling av personopplysninger skal meldes i god tid før innsamling og registrering tar til.

Avdelingskontorer / District Offices:

OSLO: NSD, Universitetet i Oslo, Postboks 1055 Blindern, 0316 Oslo. Tel: +47-22 85 52 11. nsd@uio.no  
TRONDHEIM: NSD, Norges teknisk-naturvitenskapelige universitet, 7491 Trondheim. Tel: +47-73 59 13 07. lyne.svanha@svt.ntnu.no  
TROMSØ: NSD, HSL, Universitetet i Tromsø, 9037 Tromsø. Tel: +47-77 64 61 53. sokli.anderssen@uit.no

### **Prosjektvurdering**

Prosjektet er meldt som en internasjonal samarbeidsstudie, men i epost 29.4.2015 informerer student om at det kun er UiO som skal behandle personopplysninger.

Formålet er å kartlegge oppfatninger om og arbeid med svangerskapsforgiftning i Hargeisa, Somaliland. Prosjektets formål ble vurdert av REK sør-øst 24.6.2014 til å falle utenfor helseforskningslovens virkeområde.

Utvalget består av helsearbeidere som jobber med pasienter med svangerskapsforgiftning ved to ulike sykehus.

Utvalget ble informert skriftlig og muntlig om prosjektet og samtykket til deltakelse. Informasjonsskrivet som var lagt ved meldeskjema var noe mangelfullt utformet, men i epost 30.4.2015 bekrefter student at utvalget også fikk informasjon om at UiO er behandlingsansvarlig institusjon, og kontaklinformasjon til student og veileder. Samlet sett er derfor informasjonen som er gitt tilfredsstillende.

Personvernombudet legger til grunn at student og forsker etterfølger Universitetet i Oslo sine interne rutiner for datasikkerhet. Dersom personopplysninger lagres på privat pc /mobile enheter, bør opplysningene krypteres tilstrekkelig.

Forventet prosjektslutt er 19.6.2015. I epost 29.4.2015 informerer student om at hun vil forespørre utvalget om deres tillatelse til å bruke det innsamlede datamaterialet i en oppfølgingsstudie. Opplysningene skal etter planen lagres i ett år etter prosjektslutt. Vi gjør oppmerksom på at det må sendes inn ny melding for en eventuell oppfølgingsstudie.

Student vil anonymisere innsamlede opplysninger fra personer som eventuelt ikke samtykker til videre lagring/bruk av data. Anonymisering innebærer å bearbeide datamaterialet slik at ingen enkeltpersoner kan gjenkjennes. Det gjøres ved å:

- slette direkte personopplysninger (som navn/koblingsnøkkel)
- slette/omskrive indirekte personopplysninger (identifiserende sammenstilling av bakgrunnsopplysninger som f.eks. bosted/arbeidssted, alder og kjønn)

### **Avslutning**

Personvernombudets vurdering forutsetter at prosjektet gjennomføres i tråd med opplysningene gitt i meldeskjemaet, korrespondanse med personvernombudet, samt personopplysningsloven med forskrifter.

Det gjøres oppmerksom på at det skal gis ny melding dersom behandlingen endres i forhold til de opplysninger som ligger til grunn for personvernombudets vurdering. Endringsmeldinger gis via et eget skjema, <http://www.nsd.uib.no/personvern/meldeplikt/skjema.html>. Det skal også gis melding etter tre år dersom prosjektet fortsatt pågår. Meldinger skal skje skriftlig til ombudet.

Personvernombudet har lagt ut opplysninger om prosjektet i en offentlig database, <http://pro.nsd.no/prosjekt>.

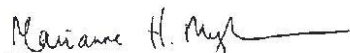
Personvernombudet vil ved prosjektets avslutning, 19.6.2015, rette en henvendelse angående status for behandlingen av personopplysninger.

Ta gjerne kontakt dersom noe er uklart.

Vennlig hilsen



Katrine Utaaker Scgadal



Marianne Høgetveit Myhren

Kopi:

Det medisinske fakultet, Universitetet i Oslo

Amal Yassin, Olav M. Tørviks vei 12, H306, 0864 OSLO

